```
Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
              ||||||||||||||||||||||||||||||||||||||||||||
Db         26 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 68
```

```
RESULT 24
AAR48590
ID   AAR48590 standard; peptide; 70 AA.
XX
AC   AAR48590;
XX
DT   25-MAR-2003  (revised)
DT   15-AUG-1994  (first entry)
XX
DE   Human IGF-I peptide 1-70.
XX
KW   IGF-I; insulin-like growth factor-I; somatomedin-c.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   Peptide         1. .70
FT                   /note= "1-70 region of human IGF-I"
XX
PN   WO9404569-A1.
XX
PD   03-MAR-1994.
XX
PF   20-AUG-1993;   93WO-GB001774.
XX
PR   20-AUG-1992;   92GB-00017696.
XX
PA   (AGRI-) AGRIC & FOOD RES COUNCIL.
XX
PI   Pell JM,  Bates PC,  Stewart EH;
XX
DR   WPI; 1994-083113/10.
XX
PT   Specific binding molecules which enhance insulin like growth factor-I
PT   activity - for use in treating or preventing conditions in which IGF-I is
PT   useful.
XX
PS   Disclosure; Page 28; 103pp; English.
XX
CC   Antibodies and other specific binding molecules which bind to insulin-
CC   like growth factor-I (IGF-I), particularly the 1-17, 18-21, 22-37, 45-53,
CC   54-60 or, especially, the 36-44 region, potentiate or enhance IGF-I
CC   activity. (Updated on 25-MAR-2003 to correct PN field.)
XX
SQ   Sequence 70 AA;

  Query Match             50.0%;  Score 43;  DB 2;  Length 70;
  Best Local Similarity   100.0%;  Pred. No. 1.1e-35;
  Matches   43;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
              ||||||||||||||||||||||||||||||||||||||||||||
Db         26 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 68
```

```
RESULT 25
AAR75657
ID   AAR75657 standard; protein; 70 AA.
XX
AC   AAR75657;
XX
DT   25-MAR-2003  (revised)
DT   30-AUG-1995  (first entry)
XX
DE   Human insulin-like growth factor I.
XX
KW   Polycistronic gene; insulin-like growth factor I; IGF-I; cistron;
KW   protecting peptide; recombinant production.
XX
OS   Homo sapiens.
XX
PN   JP06319556-A.
XX
PD   22-NOV-1994.
XX
PF   11-SEP-1986;   93JP-00111559.
XX
PR   17-SEP-1985;   85GB-00022977.
PR   11-SEP-1986;   86JP-00214736.
XX
PA   (FUJI ) FUJISAWA PHARM CO LTD.
XX
DR   WPI; 1995-040316/06.
XX
PT   Gene coding for human insulin-like growth factor I (IGF-I) fused to
PT   protecting peptide - for preparation of IGF-I.
XX
PS   Disclosure; Page 2; 11pp; Japanese.
XX
CC   A fusion protein (AAR66762) comprises a protecting peptide (AAR75658)
CC   which has a methionine residue as its C-terminal amino acid, fused to
CC   insulin-like growth factor I (IGF-I) via the methionine residue. The gene
CC   encoding the fusion protein may be used in the construction of expression
CC   vectors, which in turn can be used for the transformation of suitable
CC   microbial host cells. The polycistronic gene allows the efficient
CC   preparation of IGF-I. (Updated on 25-MAR-2003 to correct PF field.)
CC   (Updated on 25-MAR-2003 to correct PR field.)
XX
SQ   Sequence 70 AA;

  Query Match             50.0%;  Score 43;  DB 2;  Length 70;
  Best Local Similarity   100.0%;  Pred. No. 1.1e-35;
  Matches   43;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
              ||||||||||||||||||||||||||||||||||||||||||||
Db         26 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 68


Search completed: March  3, 2004, 12:09:16
Job time : 54 secs
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PI Barr PJ, Merryweather JP, Mullenbach G, Urdea MS;
XX
DR WPI; 1993-296480/38.
DR N-PSDB; AAQ48492.
XX
PT Prodn. of human IGF in unicellular host cells, used as a biologically
PT active medicament - by joining IGF genes to a secretory leader and
PT processing signal sequences recognised by host then introducing vector
PT into cells for growth.
XX
PS Claim 1; Page 20-21; 30pp; English.
XX
CC This sequence represents human insulin-like growth factor I (hIGF-I). The
CC DNA encoding this sequence was joined in proper reading frame with a
CC secretory leader and processing signal sequences recognised by host cells
CC to form a structural gene downstream from and under the transcriptional
CC regulatory control of a transcription initiation region in a vector
CC compatible with the chosen host cells. The prepared vector may be used in
CC the efficient production of hIGF-I by unicellular host cells, esp. yeast.
CC Mature human IGF-I and IGF-II (see also AAR41775) produced in this manner
CC may be used in medicaments. The synthetic coding sequence, pref.
CC containing host-preferred codons, is joined in the same reading frame to
CC secretion and processing signals which allow "pre"-IGF to be secreted by
CC the host. This facilitates purification. (Updated on 25-MAR-2003 to
CC correct PN field.) (Updated on 25-MAR-2003 to correct PF field.) (Updated
CC on 25-MAR-2003 to correct PR field.)
XX
SQ Sequence 70 AA;

Query Match 50.0%; Score 43; DB 2; Length 70;
Best Local Similarity 100.0%; Pred. No. 1.1e-35;
Matches 43; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
||||||||||||||||||||||||||||||||||||||||||||
Db 26 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 68

RESULT 22
AAR43606
ID AAR43606 standard; peptide; 70 AA.
XX
AC AAR43606;
XX
DT 25-MAR-2003 (revised)
DT 10-MAY-1994 (first entry)
XX
DE Peptide derived from insulin-like growth factor.
XX
KW IGF; IGF-II; neuronal cell survival; neurite regeneration; stroke;
KW epilepsy; Parkinson's disease; head injury; spinal cord injury;
KW age- related neuronal loss; amylotropic lateral sclerosis; cyclic.
XX
OS Synthetic.
XX
PN WO9320836-A1.
XX
PD 28-OCT-1993.
XX
PF 14-APR-1993; 93WO-US003515.
XX
PR 15-APR-1992; 92US-00869913.
PR 07-OCT-1992; 92US-00958903.
XX
PA (CEPH-) CEPHALON INC.
XX
PI Lewis ME, Kauer JC, Smith KR, Callison KV, Baldino F, Neff N;
PI Iqbal M;
XX
DR WPI; 1993-351361/44.
XX
PT Peptide(s) derived from insulin-like growth factor - used for promoting
PT neuronal cell survival and neurite regeneration, partic. in treating
PT diseases e.g. stroke, epilepsy, Parkinson's, etc.
XX
PS Disclosure; Page 81; 119pp; English.
XX
CC The sequence is that of a fragment of insulin-like growth factor II (IGF-
CC II). The synthetic peptide can be used to enhance the survival of
CC neuronal cells in a mammal that are at risk of dying or to treat a head
CC or spinal cord injury, or to enhance neurite regeneration in a mammal, or
CC to treat stroke, epilepsy, age-related neuronal loss, amylotropic lateral
CC sclerosis and Parkinson's disease. See also AAR43590-645. (Updated on 25-
CC MAR-2003 to correct PN field.)
XX
SQ Sequence 70 AA;

Query Match 50.0%; Score 43; DB 2; Length 70;
Best Local Similarity 100.0%; Pred. No. 1.1e-35;
Matches 43; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
||||||||||||||||||||||||||||||||||||||||||||
Db 26 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 68

RESULT 23
AAR55275
ID AAR55275 standard; protein; 70 AA.
XX
AC AAR55275;
XX
DT 25-MAR-2003 (revised)
DT 29-DEC-1994 (first entry)
XX
DE Sequence of insulin-like growth factor (IGF-1).
XX
KW Insulin-like growth factor; IGF-1; mutein; ss.
XX
OS Homo sapiens.
XX
PN WO9412219-A2.
XX
PD 09-JUN-1994.
XX
PF 24-NOV-1993; 93WO-US011458.
XX
PR 25-NOV-1992; 92US-00980519.
XX
PA (SYND) SYNERGEN INC.
XX
PI Cox GN, Mcdermott MJ;
XX
DR WPI; 1994-199978/24.
XX
PT New polyethylene glycol conjugates of insulin-like growth factor muteins
PT - including new muteins with a free cysteine in the N-terminal region.
XX
PS Disclosure; Page 8; 32pp; English.
XX
CC The IGF muteins of the invention are produced by modifying wt IGF, esp.
CC at the N-terminus. The sequence of IGF-1 starting from the N- terminal
CC end is given in AAR55275. In the examples, four muteins of IGF-1 were
CC constructed. Three of the muteins replaced each of the first three AAs of
CC IGF-1 with a Cys. These muteins are referred to as C1, C2 and C3
CC respectively (AAQ65692, AAQ65693, AAQ65694). The fourth mutein introduced
CC a Cys between the N-terminal Met and the first AA of IGF-1. This mutein
CC is referrred to as -1C (AAQ65691). (Updated on 25-MAR-2003 to correct PN
CC field.)
XX
SQ Sequence 70 AA;

Query Match 50.0%; Score 43; DB 2; Length 70;
Best Local Similarity 100.0%; Pred. No. 1.1e-35;
Matches 43; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

ID AAR10587 standard; protein; 70 AA.
XX
AC AAR10587;
XX
DT 09-JAN-2003 (revised)
DT 10-APR-1991 (first entry)
XX
DE Modified mammalian somatomedin C containing metal-chelating sequence.
XX
KW Bovine somatotopin C; milk production; dairy cows.
XX
OS Bos taurus.
XX
FH Key Location/Qualifiers
FT Misc-difference 12
FT /label= Mutated Asp to His
FT Misc-difference 16
FT /label= Mutated Phe to His
XX
PN EP409814-A.
XX
PD 23-JAN-1991.
XX
PF 16-JUL-1990; 90EP-00870109.
XX
PR 21-JUL-1989; 89US-00383778.
XX
PA (MONS) MONSANTO CO.
XX
PI Haymore BL, Bild GS, Krivi GG;
XX
DR WPI; 1991-024364/04.
XX
PT Variant proteins and polypeptide(s) - have enhanced binding affinity for
PT immobilised-metal affinity matrices.
XX
PS Claim 10; Page 23; 27pp; English.
XX
CC The two mutations introduce a metal-chelating sequence to the
CC stomatomedin, enhancing the proteins ability to bind to immobilised-
CC metal affinity matrix, useful in fractionating the variant proteins. DNA
CC encoding the sequence is also claimed but not given in the specification.
CC Wild type sequence was obtained from the International Journal of Peptide
CC and Protein Resources 36(4)356-61. (Updated on 09-JAN-2003 to add missing
CC OS field.)
XX
SQ Sequence 70 AA;

Query Match 50.0%; Score 43; DB 2; Length 70;
Best Local Similarity 100.0%; Pred. No. 1.1e-35;
Matches 43; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
||||||||||||||||||||||||||||||||||||||||||||
Db 26 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 68

RESULT 20
AAR36846
ID AAR36846 standard; peptide; 70 AA.
XX
AC AAR36846;
XX
DT 25-MAR-2003 (revised)
DT 02-SEP-1993 (first entry)
XX
DE Insulin-like growth factor-I.
XX
KW IGF-I; disorder; treatment; survival; retinal neuronal cells; promotion;
KW injury; ageing; disease; photodegeneration; trauma; axotomy;
KW neurotoxic-excitatory degeneration; diabetic retinopathy;
KW ischemic neuronal degeneration; inherited retinal dystrophy;
KW Alzheimer's disease; infantile malignant osteopetrosis; cholestasis;
KW ceroid-lipofuscosis.
XX
OS Homo sapiens.
XX
PN WO9308826-A1.
XX
PD 13-MAY-1993.
XX
PF 03-NOV-1992; 92WO-US009443.
XX
PR 08-NOV-1991; 91US-00790690.
PR 15-OCT-1992; 92US-00963329.
XX
PA (CEPH-) CEPHALON INC.
XX
PI Bozyczko-Coyne D, Neff N, Lewis ME, Iqbal M;
XX
DR WPI; 1993-167389/20.
XX
PT Use of IGF-I or IGF-II or their functional derivs. - for treating
PT disorders characterised by death and/or dysfunction of retinal cells.
XX
PS Example; Page 50; 97pp; English.
XX
CC The sequence is that of human insulin-like growth factor (IGF)-I which
CC promotes the survival of retinal neuronal cells. It can be used for the
CC treatment of retinal neuronal tissues which are suffering from the
CC effects of injury, ageing and/or disease such as photodegeneration,
CC trauma, axotomy, neurotoxic-excitatory degeneration, ischemic neuronal
CC degeneration, inherited retinal dystrophy, diabetic retinopathy,
CC Alzheimer's disease, infantile malignant osteopetrosis, ceroid
CC lipofuscosis or cholestasis. (Updated on 25-MAR-2003 to correct PN
CC field.)
XX
SQ Sequence 70 AA;

Query Match 50.0%; Score 43; DB 2; Length 70;
Best Local Similarity 100.0%; Pred. No. 1.1e-35;
Matches 43; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
||||||||||||||||||||||||||||||||||||||||||||
Db 26 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 68

RESULT 21
AAR41774
ID AAR41774 standard; protein; 70 AA.
XX
AC AAR41774;
XX
DT 25-MAR-2003 (revised)
DT 25-MAR-1994 (first entry)
XX
DE hIGF-I.
XX
KW Human; insulin-like growth factor; hIGF-I; reading frame;
KW secretory signal; transcription; regulation; vector; host cell; yeast;
KW IGF-II; "pre"-IGF.
XX
OS Homo sapiens.
XX
PN EP561137-A1.
XX
PD 22-SEP-1993.
XX
PF 13-APR-1984; 93EP-00101654.
XX
PR 25-APR-1983; 83US-00487950.
PR 13-APR-1984; 84EP-00104175.
XX
PA (CHIR) CHIRON CORP.
XX

```
CC   a growth promotant, to promote wound healing and to stimulate
CC   erythropoiesis. It is produced by chemical synthesis or recombinant DNA
CC   techniques using IGF-I DNA sequences prepd. synthetically, chromosomally
CC   or by recombinant DNA techniques, to transform bacterial, yeast or tissue
CC   culture cell lines. A synthetic gene for Analogue C is claimed in Claim
CC   14
XX
SQ   Sequence 70 AA;

  Query Match             50.0%;  Score 43;  DB 1;  Length 70;
  Best Local Similarity   100.0%;  Pred. No. 1.1e-35;
  Matches   43;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
              |||||||||||||||||||||||||||||||||||||||||||
Db         26 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 68


RESULT 17
AAP91502
ID   AAP91502 standard; peptide; 70 AA.
XX
AC   AAP91502;
XX
DT   25-MAR-2003  (revised)
DT   06-JUN-1990  (first entry)
XX
DE   New insulin-like growth factor-1 (IGF-I) deriv.
XX
KW   Insulin-like growth factor-I; IGF-I; derivative; disulphide bond;
KW   growth promoter; tissue repair.
XX
OS   Unidentified.
XX
FH   Key             Location/Qualifiers
FT   Disulfide-bond  6
FT                   /note= "Bonded to Cys-47"
FT   Disulfide-bond  18
FT                   /note= "Bonded to Cys-61"
FT   Disulfide-bond  47
FT                   /note= "Bonded to Cys-6"
FT   Disulfide-bond  48
FT                   /note= "Bonded to Cys-52"
FT   Disulfide-bond  52
FT                   /note= "Bonded to Cys-48"
FT   Disulfide-bond  61
FT                   /note= "Bonded to Cys-18"
FT   Misc-difference 70
FT                   /label= OTHER
FT                   /note= "Ala-NH2 or Ala-OH"
XX
PN   JP01066199-A.
XX
PD   13-MAR-1989.
XX
PF   04-SEP-1987;   87JP-00222735.
XX
PR   04-SEP-1987;   87JP-00222735.
XX
PA   (SUMU ) SUMITOMO SEIYAKU KK.
XX
DR   WPI; 1989-119491/16.
XX
PT   New insulin-like growth factor-I deriv. - prepd. by applying oxidn. to
PT   specific peptide, used as medical compsn. for promoting growth or
PT   repairing tissue.
XX
PS   Disclosure; Page 1; 8pp; Japanese.
XX
CC   The deriv. or salt is produced by oxidation of the AAP91502. IGF-I deriv.
CC   has growth promotion action only. It is used as a medical compsn. for
CC   promoting growth or repairing tissue. (Updated on 25-MAR-2003 to correct
CC   PA field.)
XX
SQ   Sequence 70 AA;

  Query Match             50.0%;  Score 43;  DB 1;  Length 70;
  Best Local Similarity   100.0%;  Pred. No. 1.1e-35;
  Matches   43;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
              |||||||||||||||||||||||||||||||||||||||||||
Db         26 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 68


RESULT 18
AAR10586
ID   AAR10586 standard; protein; 70 AA.
XX
AC   AAR10586;
XX
DT   09-JAN-2003  (revised)
DT   10-APR-1991  (first entry)
XX
DE   Modified mammalian somatomedin C containing metal-chelating sequence.
XX
KW   Bovine somatotopin C; milk production; dairy cows.
XX
OS   Bos taurus.
XX
FH   Key             Location/Qualifiers
FT   Misc-difference 8
FT                   /label= Mutated Ala to His
FT   Misc-difference 12
FT                   /label= Mutated Asp to His
XX
PN   EP409814-A.
XX
PD   23-JAN-1991.
XX
PF   16-JUL-1990;   90EP-00870109.
XX
PR   21-JUL-1989;   89US-00383778.
XX
PA   (MONS ) MONSANTO CO.
XX
PI   Haymore BL,  Bild GS,  Krivi GG;
XX
DR   WPI; 1991-024364/04.
XX
PT   Variant proteins and polypeptide(s) - have enhanced binding affinity for
PT   immobilised-metal affinity matrices.
XX
PS   Claim 9; Page 23; 27pp; English.
XX
CC   The two mutations introduce a metal-chelating sequence to the
CC   stomatomedin, enhancing the proteins ability to bind to immobilised-
CC   metal affinity matrix, useful in fractionating the variant proteins. DNA
CC   encoding the sequence is also claimed but not given in the specification.
CC   Wild type sequence was obtained from the International Journal of Peptide
CC   and Protein Resources 36(4)356-61. (Updated on 09-JAN-2003 to add missing
CC   OS field.)
XX
SQ   Sequence 70 AA;

  Query Match             50.0%;  Score 43;  DB 2;  Length 70;
  Best Local Similarity   100.0%;  Pred. No. 1.1e-35;
  Matches   43;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
              |||||||||||||||||||||||||||||||||||||||||||
Db         26 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 68


RESULT 19
AAR10587
```

OS Homo sapiens.
XX
PN EP309050-A.
XX
PD 29-MAR-1989.
XX
PF 16-SEP-1988; 88EP-00202032.
XX
PR 21-SEP-1987; 87US-00099367.
XX
PA (MERI) MERCK & CO INC.
XX
PI Applebaum JD, Bayne ML, Cascieri MA;
XX
DR WPI; 1989-095235/13.
DR N-PSDB; AAN90689.
XX
PT Human insulin-like growth factor analogues - have higher activity due to
PT reduced affinity for serum components while retaining affinity to type I
PT receptor.
XX
PS Disclosure; Page ?; 27pp; English.
XX
CC It is a synthetic polypeptide analogue of hIGF-I called IGF122 or
CC Analogue B. Analogue B retains nearly full activity at the type I IGF
CC receptor but does not bind to serum components. It is considerably more
CC active than wild-type hIGF-I. It is highly active as an agent to increase
CC the yield and efficiency of milk prodn. esp. in cows. It is also used as
CC a growth promotant, to promote wound healing and to stimulate
CC erythropoiesis. It is produced by chemical synthesis or recombinant DNA
CC techniques using IGF-I DNA sequences prepd. synthetically, chromosomally
CC or by recombinant DNA techniques, to transform bacterial, yeast or tissue
CC culture cell lines. A synthetic gene for Analogue B is claimed in Claim
CC 12
XX
SQ Sequence 70 AA;

Query Match 50.0%; Score 43; DB 1; Length 70;
Best Local Similarity 100.0%; Pred. No. 1.1e-35;
Matches 43; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
||||||||||||||||||||||||||||||||||||||||||||
Db 26 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 68

RESULT 15
AAP94660
ID AAP94660 standard; protein; 70 AA.
XX
AC AAP94660;
XX
DT 17-JUL-1990 (first entry)
XX
DE Analogue IGF252 of human insulin-like growth factor-I (hIGF-I).
XX
KW Synthetic gene; human insulin-like growth factor I; IGF252; Analogue D;
KW lactation enhancer; growth promoter; wound healing; erythropoiesis.
XX
OS Homo sapiens.
XX
PN EP309050-A.
XX
PD 29-MAR-1989.
XX
PF 16-SEP-1988; 88EP-00202032.
XX
PR 21-SEP-1987; 87US-00099367.
XX
PA (MERI) MERCK & CO INC.
XX
PI Applebaum JD, Bayne ML, Cascieri MA;
XX
DR WPI; 1989-095235/13.
DR N-PSDB; AAN90691.
XX
PT Human insulin-like growth factor analogues - have higher activity due to
PT reduced affinity for serum components while retaining affinity to type I
PT receptor.
XX
PS Disclosure; Page; 27pp; English.
XX
CC It is a synthetic polypeptide analogue of hIGF-I called IGF252 or
CC Analogue D. Analogue D retains nearly full activity at the type I IGF
CC receptor but does not bind to serum components. It is considerably more
CC active than wild-type hIGF-I. It is highly active as an agent to increase
CC the yield and efficiency of milk prodn. esp. in cows. It is also used as
CC a growth promotant, to promote wound healing and to stimulate
CC erythropoiesis. It is produced by chemical synthesis or recombinant DNA
CC techniques using IGF-I DNA sequences prepd. synthetically, chromosomally
CC or by recombinant DNA techniques, to transform bacterial, yeast or tissue
CC culture cell lines. A synthetic gene for Analogue D is claimed in Claim
CC 16
XX
SQ Sequence 70 AA;

Query Match 50.0%; Score 43; DB 1; Length 70;
Best Local Similarity 100.0%; Pred. No. 1.1e-35;
Matches 43; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
||||||||||||||||||||||||||||||||||||||||||||
Db 26 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 68

RESULT 16
AAP94661
ID AAP94661 standard; protein; 70 AA.
XX
AC AAP94661;
XX
DT 17-JUL-1990 (first entry)
XX
DE Analogue IGF130 of human insulin-like growth factor-I (hIGF-I).
XX
KW Synthetic gene; human insulin-like growth factor I; IGF130; Analogue C;
KW lactation enhancer; growth promoter; wound healing; erythropoiesis.
XX
OS Homo sapiens.
XX
PN EP309050-A.
XX
PD 29-MAR-1989.
XX
PF 16-SEP-1988; 88EP-00202032.
XX
PR 21-SEP-1987; 87US-00099367.
XX
PA (MERI) MERCK & CO INC.
XX
PI Applebaum JD, Bayne ML, Cascieri MA;
XX
DR WPI; 1989-095235/13.
DR N-PSDB; AAN90690.
XX
PT Human insulin-like growth factor analogues - have higher activity due to
PT reduced affinity for serum components while retaining affinity to type I
PT receptor.
XX
PS Disclosure; Page ?; 27pp; English.
XX
CC It is a synthetic polypeptide analogue of hIGF-I called IGF130 or
CC Analogue C. Analogue C retains nearly full activity at the type I IGF
CC receptor but does not bind to serum components. It is considerably more
CC active than wild-type hIGF-I. It is highly active as an agent to increase
CC the yield and efficiency of milk prodn. esp. in cows. It is also used as

```
PI   Barr PJ, Merryweath JP, Mullenbach G, Urdea MS;
XX
DR   WPI; 1984-271223/44.
DR   N-PSDB; AAN40026.
XX
PT   Prodn. of human insulin-like growth factors - by DNA recombinant method,
PT   utilising yeast transformant.
XX
PS   Disclosure; Page 23; 24pp; English.
XX
CC   The inventors claim a DNA construct which comprises AAN40026 or AAN40027.
CC   The DNA constructs are stably replicated in yeasts in which pre-
CC   polypeptides form in high yield. The yeast cells are then able to process
CC   the pre-forms to the mature IGF. (Updated on 25-MAR-2003 to correct PA
CC   field.)
XX
SQ   Sequence 70 AA;

  Query Match             50.0%;  Score 43;  DB 1;  Length 70;
  Best Local Similarity   100.0%;  Pred. No. 1.1e-35;
  Matches   43;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
              |||||||||||||||||||||||||||||||||||||||||||
Db         26 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 68


RESULT 12
AAP71539
ID   AAP71539 standard; protein; 70 AA.
XX
AC   AAP71539;
XX
DT   25-MAR-2003  (revised)
DT   10-MAR-2003  (revised)
DT   26-MAY-1991  (first entry)
XX
DE   Sequence of human insulin-like growth factor I (IGF-I).
XX
KW   Hormone; growth promoter.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   Disulfide-bond  6. .47
FT   Disulfide-bond  18. .61
FT   Disulfide-bond  48. .52
XX
PN   JP62169733-A.
XX
PD   25-JUL-1987.
XX
PF   22-JAN-1986;   86JP-00011280.
XX
PR   22-JAN-1986;   86JP-00011280.
XX
PA   (FUJI ) FUJISAWA PHARM CO LTD.
XX
DR   WPI; 1987-246982/35.
XX
PT   Human insulin-growth factor, which has a new prim. structure - is prepd.
PT   by oxidising reduced form IGF-I and treating the obtd. cpds. by e.g.
PT   chromatography, and is used for incorporating thymidine.
XX
PS   Claim 2; Page 1; 6pp; Japanese.
XX
CC   The IGF-I (and its salts) has strong effect for acceleration of thymidine
CC   incorporation into animal cells, suggesting that it has strong growth
CC   promoting effect. However it has no blood sugar lowering effect. (Updated
CC   on 10-MAR-2003 to add missing OS field.) (Updated on 25-MAR-2003 to
CC   correct PA field.)
XX
SQ   Sequence 70 AA;

  Query Match             50.0%;  Score 43;  DB 1;  Length 70;
  Best Local Similarity   100.0%;  Pred. No. 1.1e-35;
  Matches   43;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
              |||||||||||||||||||||||||||||||||||||||||||
Db         26 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 68


RESULT 13
AAP70414
ID   AAP70414 standard; protein; 70 AA.
XX
AC   AAP70414;
XX
DT   25-MAR-2003  (revised)
DT   19-FEB-1991  (first entry)
XX
DE   Sequence of oxidative human insulin-like growth factor I (IGF-I) (A
DE   type).
XX
KW   Hormone; sanatomedin.
XX
OS   Homo sapiens.
XX
PN   JP62190199-A.
XX
PD   20-AUG-1987.
XX
PF   14-FEB-1986;   86JP-00031512.
XX
PR   14-FEB-1986;   86JP-00031512.
XX
PA   (FUJI ) FUJISAWA PHARM CO LTD.
XX
DR   WPI; 1987-273817/39.
XX
PT   Human insulin like growth factor I prodn. - by oxidising reductive human
PT   insulin-like growth factor.
XX
PS   Claim 2; Page 935; 6pp; Japanese.
XX
CC   The production of IGF-I-A by oxidising reductive human insulin-like
CC   growth factor in a buffer soln. and separating I-A from the reaction
CC   soln. is improved by the presence of an organic solvent which can
CC   dissolve in the buffer soln. in the reaction system. (Updated on 25-MAR-
CC   2003 to correct PA field.)
XX
SQ   Sequence 70 AA;

  Query Match             50.0%;  Score 43;  DB 1;  Length 70;
  Best Local Similarity   100.0%;  Pred. No. 1.1e-35;
  Matches   43;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
              |||||||||||||||||||||||||||||||||||||||||||
Db         26 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 68


RESULT 14
AAP93366
ID   AAP93366 standard; protein; 70 AA.
XX
AC   AAP93366;
XX
DT   17-JUL-1990  (first entry)
XX
DE   Analogue IGF122 of human insulin-like growth factor-I (hIGF-I).
XX
KW   Synthetic gene; human insulin-like growth factor I; IGF122; Analogue B;
KW   lactation enhancer; growth promoter; wound healing; erythropoiesis.
XX
```

```
RESULT 9
AAR36847
ID   AAR36847 standard; peptide; 67 AA.
XX
AC   AAR36847;
XX
DT   25-MAR-2003  (revised)
DT   02-SEP-1993  (first entry)
XX
DE   Insulin-like growth factor-I functional derivative.
XX
KW   IGF-I; disorder; treatment; survival; retinal neuronal cells; promotion;
KW   injury; ageing; disease; photodegeneration; trauma; axotomy;
KW   neurotoxic-excitatory degeneration; diabetic retinopathy;
KW   ischemic neuronal degeneration; inherited retinal dystrophy;
KW   Alzheimer's disease; infantile malignant osteopetrosis; cholestasis;
KW   ceroid-lipofuscosis.
XX
OS   Homo sapiens.
XX
PN   WO9308826-A1.
XX
PD   13-MAY-1993.
XX
PF   03-NOV-1992;   92WO-US009443.
XX
PR   08-NOV-1991;   91US-00790690.
PR   15-OCT-1992;   92US-00963329.
XX
PA   (CEPH-) CEPHALON INC.
XX
PI   Bozyczko-Coyne D,  Neff N,  Lewis ME,  Iqbal M;
XX
DR   WPI; 1993-167389/20.
XX
PT   Use of IGF-I or IGF-II or their functional derivs. - for treating
PT   disorders characterised by death and/or dysfunction of retinal cells.
XX
PS   Example; Page 50; 97pp; English.
XX
CC   The sequence is that of a functional derivative of human insulin-like
CC   growth factor (IGF)-I which promotes the survival of retinal neuronal
CC   cells. It can be used for the treatment of retinal neuronal tissues which
CC   are suffering from the effects of injury, ageing and/or disease such as
CC   photodegeneration, trauma, axotomy, neurotoxic-excitatory degeneration,
CC   ischemic neuronal degeneration, inherited retinal dystrophy, diabetic
CC   retinopathy, Alzheimer's disease, infantile malignant osteopetrosis,
CC   ceroid lipofuscosis or cholestasis. (Updated on 25-MAR-2003 to correct PN
CC   field.)
XX
SQ   Sequence 67 AA;

  Query Match             50.0%;  Score 43;  DB 2;  Length 67;
  Best Local Similarity   100.0%;  Pred. No. 1.1e-35;
  Matches   43;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
              |||||||||||||||||||||||||||||||||||||||||||
Db         23 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 65


RESULT 10
AAY51168
ID   AAY51168 standard; protein; 69 AA.
XX
AC   AAY51168;
XX
DT   31-MAR-2000  (first entry)
XX
DE   Seq ID 2 used in the isolation of insulin-like growth factor.
XX
KW   Insulin-like growth factor-1; yeast; human; alpha-factor;
KW   ethanol dehydrogenase.
XX
OS   Unidentified.
XX
PN   CN1229133-A.
XX
PD   22-SEP-1999.
XX
PF   18-MAR-1998;   98CN-00106111.
XX
PR   18-MAR-1998;   98CN-00106111.
XX
PA   (SHEN-) SHENGBAIAO BIOTECHNOLOGY INST BEIJING.
XX
PI   Huang L,  Zhu Y;
XX
DR   WPI; 2000-087760/08.
DR   N-PSDB; AAZ44266.
XX
PT   Insulin-like growth factor-1 bacterial expression system and method for
PT   preparation of insulin-like growth factor-1.
XX
PS   Claim 3; Page 2; 23pp; Chinese.
XX
CC   This invention describes a novel engineered fungal strain of human
CC   insulin-like growth factor-1 and a process for preparing human insulin-
CC   like growth factor-1 with the fungus. The engineered fungus is a beer
CC   yeast cell, which contains the gene sequence of human insulin-like growth
CC   factor-1, which is able to encode 69 amino acids. The 5' end of the gene
CC   sequence is connected with an alpha-factor leading peptide sequence,
CC   before which a Kozak order is fused. It is then cloned to a position
CC   downstream of an ethanol dehydrogenase promoter to form the expression
CC   carrier. Finally,beer yeast cells are transformed to obtain the genetic
CC   engineered fungus strain BJ-IGF-1, which can secrete human insulin-like
CC   growth factor-1. This sequence represents a protein used to illustrate
CC   the method of the invention
XX
SQ   Sequence 69 AA;

  Query Match             50.0%;  Score 43;  DB 3;  Length 69;
  Best Local Similarity   100.0%;  Pred. No. 1.1e-35;
  Matches   43;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
              |||||||||||||||||||||||||||||||||||||||||||
Db         26 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 68


RESULT 11
AAP40034
ID   AAP40034 standard; protein; 70 AA.
XX
AC   AAP40034;
XX
DT   25-MAR-2003  (revised)
DT   02-FEB-1992  (first entry)
XX
DE   Sequence of human insulin-like growth factor I (IGF-I).
XX
KW   Yeast expression vector; somatic growth; growth promoter.
XX
OS   Homo sapiens.
XX
PN   EP123228-A.
XX
PD   31-OCT-1984.
XX
PF   13-APR-1984;   84EP-00104175.
XX
PR   25-APR-1983;   83US-00487950.
XX
PA   (CHIR ) CHIRON CORP.
XX
```

```
                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         26 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAKAARSVRAQRHTDMPKTQ 85

Qy         61 K 61
              |
Db         86 K 86
```

RESULT 7
AAU10564
ID AAU10564 standard; protein; 105 AA.
XX
AC AAU10564;
XX
DT 25-FEB-2002 (first entry)
XX
DE Rabbit insulin-like growth factor I liver-type isoform (L.IGF-I).
XX
KW Rabbit; mechano-growth factor; insulin-like growth factor I; IGF-I; MGF;
KW neuroprotective; nerve damage; peripheral nervous system; nerve severing;
KW muscle; neurological disorder; motoneuron loss; motorneuron disorder;
KW nerve avulsion; insulin-like growth factor I liver-type isoform; L.IGF-I.
XX
OS Oryctolagus cuniculus.
XX
PN WO200185781-A2.
XX
PD 15-NOV-2001.
XX
PF 10-MAY-2001; 2001WO-GB002054.
XX
PR 10-MAY-2000; 2000GB-00011278.
XX
PA (UNLO) UNIV COLLEGE LONDON.
PA (EGRI-) EAST GRINSTEAD MEDICAL RES TRUST.
XX
PI Goldspink G, Terenghi G;
XX
DR WPI; 2002-055585/07.
DR N-PSDB; AAS16884.
XX
PT Use of insulin-like growth factor-I (IGF-I) isoform known as mechano
PT growth factor which is encoded by IGF-I exons 4,5,6 and has ability to
PT reduce motoneurone loss in response to nerve avulsion, to treat nerve
PT damage.
XX
PS Disclosure; Fig 10; 65pp; English.
XX
CC The invention relates to the use of an insulin-like growth factor I (IGF-
CC I) isoform, known as mechano-growth factor (MGF), in the manufacture of a
CC medicament for treating nerve damage in the peripheral nervous system, or
CC for treating nerve damage by localising MGF at the site of damage. The
CC nerve damage may include severing of a nerve. The treatment may be
CC combined with another treatment (such as a polypeptide growth factor
CC other than MGF) that prevents or diminishes degeneration of the target
CC organ (for example, muscle) which the damaged nerve innervates, whereby
CC the treatment of the muscle with MGF or a polynucleotide encoding MGF
CC prevents or diminishes degeneration. The method is useful for treating
CC neurological disorders, preferably motorneuron disorders. These methods
CC can reduce motoneuron loss by 20% or greater in response to nerve
CC avulsion. This sequence represents the rabbit insulin-like growth factor
CC I liver-type isoform (L.IGF-I) used in experiments on motoneuron loss
XX
SQ Sequence 105 AA;

```
  Query Match             70.9%;  Score 61;  DB 5;  Length 105;
  Best Local Similarity   100.0%;  Pred. No. 9.3e-54;
  Matches   61;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAKAARSVRAQRHTDMPKTQ 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         26 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAKAARSVRAQRHTDMPKTQ 85

Qy         61 K 61
              |
Db         86 K 86
```

RESULT 8
ABR63172
ID ABR63172 standard; protein; 105 AA.
XX
AC ABR63172;
XX
DT 18-DEC-2003 (first entry)
XX
DE Rabbit liver-type insulin-like growth factor 1 (C-terminal end).
XX
KW Insulin-like growth factor 1; IGF-I; rabbit; mechano growth factor;
KW cardiant; vasotropic; gene therapy.
XX
OS Oryctolagus cuniculus.
XX
PN WO2003066082-A1.
XX
PD 14-AUG-2003.
XX
PF 06-FEB-2003; 2003WO-GB000537.
XX
PR 07-FEB-2002; 2002GB-00002906.
XX
PA (UNLO) UNIV COLLEGE LONDON.
PA (UNII) UNIV ILLINOIS FOUND.
XX
PI Goldspink G, Goldspink P;
XX
DR WPI; 2003-636936/60.
DR N-PSDB; ACF79640.
XX
PT Use of Mechano Growth Factor polypeptide or polynucleotide for preventing
PT or limiting apoptosis in the myocardium, particularly for preventing or
PT limiting myocardial damage in response to ischemia or mechanical overload
PT of the heart.
XX
PS Disclosure; Fig 12; 74pp; English.
XX
CC The present sequence is the protein sequence of rabbit liver-specific
CC insulin-like growth factor 1 (IGF-1) C-terminal region. It is encoded by
CC exons 3, 4 and 6 of the IFG-I gene. The invention relates to a novel IGF-
CC I splice variant, denoted mechano growth factor, a non-liver type isoform
CC of IGF-I that is activated in response to cardiac tissue damage and which
CC has a repair function in the ischaemic and/or overloaded heart. The
CC rabbit MGF transcript has a 52 base insert in the E domain that alters
CC the reading frame and hence the C-terminal end of MGF protein in
CC comparison with other IGF-I splice variants. The invention provides use
CC of a MGF polypeptide or polynucleotide in the manufacture of a medicament
CC for the prevention or limitation of myocardial damage in response to
CC ischaemia or mechanical overload of the heart by preventing or limiting
CC apoptosis in the myocardium. The MGF polypeptide, polynucleotide or
CC medicament is also useful for administration in response to a heart
CC attack
XX
SQ Sequence 105 AA;

```
  Query Match             70.9%;  Score 61;  DB 7;  Length 105;
  Best Local Similarity   100.0%;  Pred. No. 9.3e-54;
  Matches   61;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAKAARSVRAQRHTDMPKTQ 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         26 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAKAARSVRAQRHTDMPKTQ 85

Qy         61 K 61
              |
Db         86 K 86
```

XX
DE Rabbit liver-type IGF-I isoform (L.IGF-I) protein.
XX
KW Rabbit; IGF-I isoform; Insulin-like Growth Factor-I; MGF;
KW mechano-growth factor; neurological disorder; neurodegenerative disorder;
KW amyotrophic lateral sclerosis; spinal muscular atrophy; muscular atrophy;
KW poliomyelitis; post-polio syndrome; toxin; motoneurone disorder;
KW nerve damage; autosomal muscular dystrophy; diabetic neuropathy;
KW sex-linked muscular dystrophy; peripheral neuropathy;
KW Alzheimer's disease; Parkinson's disease; liver; L.IGF-I.
XX
OS Oryctolagus cuniculus.
XX
PN WO200136483-A1.
XX
PD 25-MAY-2001.
XX
PF 15-NOV-2000; 2000WO-GB004354.
XX
PR 15-NOV-1999; 99GB-00026968.
XX
PA (UNLO) UNIV COLLEGE LONDON.
XX
PI Goldspink G, Johnson I;
XX
DR WPI; 2001-355620/37.
DR N-PSDB; AAD06405.
XX
PT Use of mechano-growth factor, an isoform of Insulin-like Growth Factor-I,
PT capable of reducing motoneurone loss, in the manufacture of a medicament
PT for the treatment of neurological disorder.
XX
PS Disclosure; Page 60-61; 66pp; English.
XX
CC The present invention relates to use of mechano-growth factor (MGF), an
CC Insulin-like Growth Factor-I (IGF-I) isoform in the manufacture of a
CC medicament for the treatment of neurological disorder. The MGF is capable
CC of reducing motoneurone loss by 20% or greater in response to nerve
CC avulsion, and effects motoneurone rescue, preferably adult motoneurone
CC rescue. The MGF polynucleotide and polypeptide are useful in the
CC manufacture of a medicament for the treatment of a neurological disorder,
CC including a disorder of motoneurones and/or neurodegenerative disorder,
CC e.g., amyotrophic lateral sclerosis, spinal muscular atrophy, progressive
CC spinal muscular atrophy, infantile or juvenile muscular atrophy,
CC poliomyelitis or post-polio syndrome, a disorder caused by exposure to a
CC toxin, motoneurone trauma, a motoneurone lesion or nerve damage, an
CC injury that affects motoneurones, motoneurone loss associated with aging,
CC autosomal or sex-linked muscular dystrophy, diabetic neuropathy,
CC peripheral neuropathies, Alzheimer's disease and Parkinson's disease. The
CC present sequence is rabbit liver-type IGF-I isoform (L.IGF-I). The L.IGF-
CC I protein comprises amino acid sequences encoded by nucleic acid sequence
CC of IGF-I exons 4 and 6. Note: The present sequence (SEQ ID NO: 14) is
CC stated as being the same as that shown in figure 10 (AAE02456) of the
CC specification. However it differs at few positions
XX
SQ Sequence 105 AA;

```
  Query Match             70.9%;  Score 61;  DB 4;  Length 105;
  Best Local Similarity   100.0%;  Pred. No. 9.3e-54;
  Matches   61;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAKAARSVRAQRHTDMPKTQ 60
              |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         26 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAKAARSVRAQRHTDMPKTQ 85

Qy         61 K 61
              |
Db         86 K 86
```

RESULT 6
AAE02456
ID AAE02456 standard; protein; 105 AA.

XX
AC AAE02456;
XX
DT 10-AUG-2001 (first entry)
XX
DE Rabbit liver-type IGF-I isoform (L.IGF-I) protein, alternative version.
XX
KW Rabbit; IGF-I isoform; Insulin-like Growth Factor-I; MGF;
KW mechano-growth factor; neurological disorder; neurodegenerative disorder;
KW amyotrophic lateral sclerosis; spinal muscular atrophy; muscular atrophy;
KW poliomyelitis; post-polio syndrome; toxin; motoneurone disorder;
KW nerve damage; autosomal muscular dystrophy; diabetic neuropathy;
KW sex-linked muscular dystrophy; peripheral neuropathy;
KW Alzheimer's disease; Parkinson's disease; liver; L.IGF-I.
XX
OS Oryctolagus cuniculus.
XX
FH Key Location/Qualifiers
FT Misc-difference 3
FT /note= "Encoded by GAG"
FT Misc-difference 9
FT /note= "Encoded by GAG"
XX
PN WO200136483-A1.
XX
PD 25-MAY-2001.
XX
PF 15-NOV-2000; 2000WO-GB004354.
XX
PR 15-NOV-1999; 99GB-00026968.
XX
PA (UNLO) UNIV COLLEGE LONDON.
XX
PI Goldspink G, Johnson I;
XX
DR WPI; 2001-355620/37.
DR N-PSDB; AAD06405.
XX
PT Use of mechano-growth factor, an isoform of Insulin-like Growth Factor-I,
PT capable of reducing motoneurone loss, in the manufacture of a medicament
PT for the treatment of neurological disorder.
XX
PS Disclosure; Fig 10; 66pp; English.
XX
CC The present invention relates to use of mechano-growth factor (MGF), an
CC Insulin-like Growth Factor-I (IGF-I) isoform in the manufacture of a
CC medicament for the treatment of neurological disorder. The MGF is capable
CC of reducing motoneurone loss by 20% or greater in response to nerve
CC avulsion, and effects motoneurone rescue, preferably adult motoneurone
CC rescue. The MGF polynucleotide and polypeptide are useful in the
CC manufacture of a medicament for the treatment of a neurological disorder,
CC including a disorder of motoneurones and/or neurodegenerative disorder,
CC e.g., amyotrophic lateral sclerosis, spinal muscular atrophy, progressive
CC spinal muscular atrophy, infantile or juvenile muscular atrophy,
CC poliomyelitis or post-polio syndrome, a disorder caused by exposure to a
CC toxin, motoneurone trauma, a motoneurone lesion or nerve damage, an
CC injury that affects motoneurones, motoneurone loss associated with aging,
CC autosomal or sex-linked muscular dystrophy, diabetic neuropathy,
CC peripheral neuropathies, Alzheimer's disease and Parkinson's disease. The
CC present sequence is alternative version of rabbit liver-type IGF-I
CC isoform (L.IGF-I). The L.IGF-I protein comprises amino acid sequences
CC encoded by nucleic acid sequence of IGF-I exons 4 and 6. Note: The
CC present sequence is stated as being the same as SEQ ID NO:14 shown in
CC sequence listing (AAE02452) of the specification. However it differs at
CC few positions
XX
SQ Sequence 105 AA;

```
  Query Match             70.9%;  Score 61;  DB 4;  Length 105;
  Best Local Similarity   100.0%;  Pred. No. 9.3e-54;
  Matches   61;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAKAARSVRAQRHTDMPKTQ 60
```

```
Qy          61 KYQPPSTNKKMKSQRRRKGSTFEEHK 86
               ||||||||||||||||||||||||||
Db          86 KYQPPSTNKKMKSQRRRKGSTFEEHK 111
```

RESULT 3
ABR63169
ID ABR63169 standard; protein; 111 AA.
XX
AC ABR63169;
XX
DT 18-DEC-2003 (first entry)
XX
DE Rabbit mechano growth factor (C-terminal end).
XX
KW Mechano growth factor; MGF; insulin-like growth factor 1; rabbit;
KW splice variant; cardiant; vasotropic; gene therapy.
XX
OS Oryctolagus cuniculus.
XX
PN WO2003066082-A1.
XX
PD 14-AUG-2003.
XX
PF 06-FEB-2003; 2003WO-GB000537.
XX
PR 07-FEB-2002; 2002GB-00002906.
XX
PA (UNLO) UNIV COLLEGE LONDON.
PA (UNII) UNIV ILLINOIS FOUND.
XX
PI Goldspink G, Goldspink P;
XX
DR WPI; 2003-636936/60.
DR N-PSDB; ACF79637.
XX
PT Use of Mechano Growth Factor polypeptide or polynucleotide for preventing
PT or limiting apoptosis in the myocardium, particularly for preventing or
PT limiting myocardial damage in response to ischemia or mechanical overload
PT of the heart.
XX
PS Claim 5; Fig 9; 74pp; English.
XX
CC The present sequence is that of the C-terminal end of novel rabbit
CC mechano growth factor (MGF), encoded by exons 3-6 of the IGF-I gene. MGF
CC is a splice variant and non-liver type isoform of insulin-like growth
CC factor (IGF-I) that is activated in response to cardiac tissue damage and
CC which has a repair function in the ischaemic and/or overloaded heart. The
CC rabbit MGF transcript has a 52 base insert in the E domain that alters
CC the reading frame and hence the C-terminal end of MGF protein in
CC comparison with other IGF-I splice variants. The invention provides use
CC of a MGF polypeptide or polynucleotide in the manufacture of a medicament
CC for the prevention or limitation of myocardial damage in response to
CC ischaemia or mechanical overload of the heart by preventing or limiting
CC apoptosis in the myocardium. The MGF polypeptide, polynucleotide or
CC medicament is also useful for administration in response to a heart
CC attack
XX
SQ Sequence 111 AA;

```
  Query Match             100.0%;  Score 86;  DB 7;  Length 111;
  Best Local Similarity   100.0%;  Pred. No. 4.8e-79;
  Matches   86;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy           1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAKAARSVRAQRHTDMPKTQ 60
               ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          26 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAKAARSVRAQRHTDMPKTQ 85

Qy          61 KYQPPSTNKKMKSQRRRKGSTFEEHK 86
               ||||||||||||||||||||||||||
Db          86 KYQPPSTNKKMKSQRRRKGSTFEEHK 111
```

RESULT 4
AAW23301
ID AAW23301 standard; protein; 121 AA.
XX
AC AAW23301;
XX
DT 14-APR-1998 (first entry)
XX
DE Rabbit insulin like growth factor 1.
XX
KW Insulin like growth factor 1; IGF-1; Ec peptide; muscle disorder; heart;
KW neuromuscular disease.
XX
OS Oryctolagus cuniculus.
XX
PN WO9733997-A1.
XX
PD 18-SEP-1997.
XX
PF 11-MAR-1997; 97WO-GB000658.
XX
PR 11-MAR-1996; 96GB-00005124.
XX
PA (UNLO) ROYAL FREE HOSPITAL SCHOOL MED.
XX
PI Goldspink G;
XX
DR WPI; 1997-470877/43.
DR N-PSDB; AAT84893.
XX
PT Use of insulin like growth factor I characterised by presence of Ec
PT peptide - to treat humans or animals, particularly muscle disorders,
PT heart conditions or neuromuscular diseases.
XX
PS Disclosure; Fig 3; 33pp; English.
XX
CC A use of insulin like growth factor I (IGF-1) has been developed, and is
CC characterised by the presence of the Ec peptide, or a functional
CC equivalent, in the treatment or therapy of a human or animal. The IGF-1
CC polypeptide can be used to treat muscular disorders, e.g. Duchenne or
CC Becker muscular dystrophy, autosomal dystrophies and related progressive
CC skeletal muscle weakness and wasting, muscle atrophy in ageing humans,
CC spinal cord injury induced muscle atrophy and neuromuscular diseases, and
CC cardiac disorders, e.g. diseases where promotion of cardiac muscle
CC protein synthesis is a beneficial treatment, cardiomyopathies and acute
CC heart failure or insult, specifically myocarditis or myocardial
CC infarction. It can also be used to promote bone fracture healing and
CC maintenance of bone in old age. The present sequence represents rabbit
CC IGF-1 used in the present specification
XX
SQ Sequence 121 AA;

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  Query Match             100.0%;  Score 86;  DB 2;  Length 121;
  Best Local Similarity   100.0%;  Pred. No. 5.2e-79;
  Matches   86;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

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Db          36 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAKAARSVRAQRHTDMPKTQ 95

Qy          61 KYQPPSTNKKMKSQRRRKGSTFEEHK 86
               ||||||||||||||||||||||||||
Db          96 KYQPPSTNKKMKSQRRRKGSTFEEHK 121
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ID AAE02452 standard; protein; 105 AA.
XX
AC AAE02452;
XX
DT 10-AUG-2001 (first entry)

99	43	50.0	345	1	AAP40674	Aap40674 Sequence
100	43	50.0	345	1	AAP50873	Aap50873 Methionyl

ALIGNMENTS

RESULT 1
AAE02449
ID AAE02449 standard; protein; 111 AA.
XX
AC AAE02449;
XX
DT 10-AUG-2001 (first entry)
XX
DE Rabbit IGF-I isoform mechano-growth factor (MGF) protein.
XX
KW Rabbit; IGF-I isoform; Insulin-like Growth Factor-I; MGF;
KW mechano-growth factor; neurological disorder; neurodegenerative disorder;
KW amyotrophic lateral sclerosis; spinal muscular atrophy; muscular atrophy;
KW poliomyelitis; post-polio syndrome; toxin; motoneurone disorder;
KW nerve damage; autosomal muscular dystrophy; diabetic neuropathy;
KW sex-linked muscular dystrophy; peripheral neuropathy;
KW Alzheimer's disease; Parkinson's disease.
XX
OS Oryctolagus cuniculus.
XX
PN WO200136483-A1.
XX
PD 25-MAY-2001.
XX
PF 15-NOV-2000; 2000WO-GB004354.
XX
PR 15-NOV-1999; 99GB-00026968.
XX
PA (UNLO) UNIV COLLEGE LONDON.
XX
PI Goldspink G, Johnson I;
XX
DR WPI; 2001-355620/37.
DR N-PSDB; AAD06400.
XX
PT Use of mechano-growth factor, an isoform of Insulin-like Growth Factor-I,
PT capable of reducing motoneurone loss, in the manufacture of a medicament
PT for the treatment of neurological disorder.
XX
PS Claim 4; Page 54; 66pp; English.
XX
CC The present invention relates to use of mechano-growth factor (MGF), an
CC Insulin-like Growth Factor-I (IGF-I) isoform in the manufacture of a
CC medicament for the treatment of neurological disorder. The MGF is capable
CC of reducing motoneurone loss by 20% or greater in response to nerve
CC avulsion, and effects motoneurone rescue, preferably adult motoneurone
CC rescue. The MGF polynucleotide and polypeptide are useful in the
CC manufacture of a medicament for the treatment of a neurological disorder,
CC including a disorder of motoneurones and/or neurodegenerative disorder,
CC e.g., amyotrophic lateral sclerosis, spinal muscular atrophy, progressive
CC spinal muscular atrophy, infantile or juvenile muscular atrophy,
CC poliomyelitis or post-polio syndrome, a disorder caused by exposure to a
CC toxin, motoneurone trauma, a motoneurone lesion or nerve damage, an
CC injury that affects motoneurones, motoneurone loss associated with aging,
CC autosomal or sex-linked muscular dystrophy, diabetic neuropathy,
CC peripheral neuropathies, Alzheimer's disease and Parkinson's disease. The
CC present sequence is rabbit IGF-I isoform MGF. MGF is a muscle isoform
CC having extracellular (Ec) domain, hence also referred as IGF-I-Ec. The
CC MGF protein comprises amino acid sequences encoded by nucleic acid
CC sequence of IGF-I exons 4, 5 and 6 in the reading frame of MGF
XX
SQ Sequence 111 AA;

Query Match 100.0%; Score 86; DB 4; Length 111;
Best Local Similarity 100.0%; Pred. No. 4.8e-79;
Matches 86; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         26 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAKAARSVRAQRHTDMPKTQ 85

Qy         61 KYQPPSTNKKMKSQRRRKGSTFEEHK 86
              ||||||||||||||||||||||||||
Db         86 KYQPPSTNKKMKSQRRRKGSTFEEHK 111
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RESULT 2
AAU10561
ID AAU10561 standard; protein; 111 AA.
XX
AC AAU10561;
XX
DT 25-FEB-2002 (first entry)
XX
DE Rabbit mechano-growth factor (MGF) polypeptide.
XX
KW Rabbit; mechano-growth factor; insulin-like growth factor I; IGF-I; MGF;
KW neuroprotective; nerve damage; peripheral nervous system; nerve severing;
KW muscle; neurological disorder; motoneuron loss; motorneuron disorder;
KW nerve avulsion.
XX
OS Oryctolagus cuniculus.
XX
PN WO200185781-A2.
XX
PD 15-NOV-2001.
XX
PF 10-MAY-2001; 2001WO-GB002054.
XX
PR 10-MAY-2000; 2000GB-00011278.
XX
PA (UNLO) UNIV COLLEGE LONDON.
PA (EGRI-) EAST GRINSTEAD MEDICAL RES TRUST.
XX
PI Goldspink G, Terenghi G;
XX
DR WPI; 2002-055585/07.
DR N-PSDB; AAS16879.
XX
PT Use of insulin-like growth factor-I (IGF-I) isoform known as mechano
PT growth factor which is encoded by IGF-I exons 4,5,6 and has ability to
PT reduce motoneurone loss in response to nerve avulsion, to treat nerve
PT damage.
XX
PS Claim 11; Fig 7; 65pp; English.
XX
CC The invention relates to the use of an insulin-like growth factor I (IGF-
CC I) isoform, known as mechano-growth factor (MGF), in the manufacture of a
CC medicament for treating nerve damage in the peripheral nervous system, or
CC for treating nerve damage by localising MGF at the site of damage. The
CC nerve damage may include severing of a nerve. The treatment may be
CC combined with another treatment (such as a polypeptide growth factor
CC other than MGF) that prevents or diminishes degeneration of the target
CC organ (for example, muscle) which the damaged nerve innervates, whereby
CC the treatment of the muscle with MGF or a polynucleotide encoding MGF
CC prevents or diminishes degeneration. The method is useful for treating
CC neurological disorders, preferably motorneuron disorders. These methods
CC can reduce motoneuron loss by 20% or greater in response to nerve
CC avulsion. This sequence represents the rabbit MGF polypeptide
XX
SQ Sequence 111 AA;

Query Match 100.0%; Score 86; DB 5; Length 111;
Best Local Similarity 100.0%; Pred. No. 4.8e-79;
Matches 86; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAKAARSVRAQRHTDMPKTQ 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         26 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAKAARSVRAQRHTDMPKTQ 85
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GenCore version 5.1.6

OM protein - protein search, using sw model

Run on: March 3, 2004, 12:03:16 ; Search time 54 Seconds
(without alignments)
449.983 Million cell updates/sec

Title: US-09-852-261-6_COPY_26_111
Perfect score: 86
Sequence: 1 NKPTGYGSSSRRAPQTGIVD.....TNKKMKSQRRRKGSTFEEHK 86

Scoring table: OLIGO
Gapop 60.0 , Gapext 60.0

Searched: 1586107 seqs, 282547505 residues

Word size : 0

Total number of hits satisfying chosen parameters: 1586107

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Listing first 100 summaries

Database : A_Geneseq_29Jan04:*
1: geneseqp1980s:*
2: geneseqp1990s:*
3: geneseqp2000s:*
4: geneseqp2001s:*
5: geneseqp2002s:*
6: geneseqp2003as:*
7: geneseqp2003bs:*
8: geneseqp2004s:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	86	100.0	111	4	AAE02449	Aae02449 Rabbit IG
2	86	100.0	111	5	AAU10561	Aau10561 Rabbit me
3	86	100.0	111	7	ABR63169	Abr63169 Rabbit me
4	86	100.0	121	2	AAW23301	Aaw23301 Rabbit in
5	61	70.9	105	4	AAE02452	Aae02452 Rabbit li
6	61	70.9	105	4	AAE02456	Aae02456 Rabbit li
7	61	70.9	105	5	AAU10564	Aau10564 Rabbit in
8	61	70.9	105	7	ABR63172	Abr63172 Rabbit li
9	43	50.0	67	2	AAR36847	Aar36847 Insulin-l
10	43	50.0	69	3	AAY51168	Aay51168 Seq ID 2
11	43	50.0	70	1	AAP40034	Aap40034 Sequence
12	43	50.0	70	1	AAP71539	Aap71539 Sequence
13	43	50.0	70	1	AAP70414	Aap70414 Sequence
14	43	50.0	70	1	AAP93366	Aap93366 Analogue
15	43	50.0	70	1	AAP94660	Aap94660 Analogue
16	43	50.0	70	1	AAP94661	Aap94661 Analogue
17	43	50.0	70	1	AAP91502	Aap91502 New insul
18	43	50.0	70	2	AAR10586	Aar10586 Modified
19	43	50.0	70	2	AAR10587	Aar10587 Modified
20	43	50.0	70	2	AAR36846	Aar36846 Insulin-l
21	43	50.0	70	2	AAR41774	Aar41774 hIGF-I. 3
22	43	50.0	70	2	AAR43606	Aar43606 Peptide d
23	43	50.0	70	2	AAR55275	Aar55275 Sequence
24	43	50.0	70	2	AAR48590	Aar48590 Human IGF
25	43	50.0	70	2	AAR75657	Aar75657 Human ins
26	43	50.0	70	2	AAR89949	Aar89949 Recombina
27	43	50.0	70	2	AAR86874	Aar86874 Insulin l
28	43	50.0	70	2	AAR87744	Aar87744 Wild type
29	43	50.0	70	2	AAW33907	Aaw33907 Peptide d
30	43	50.0	70	2	AAW12342	Aaw12342 Human mat
31	43	50.0	70	3	AAB09616	Aab09616 Insulin l
32	43	50.0	70	3	AAY88577	Aay88577 Native hu
33	43	50.0	70	3	AAY84871	Aay84871 Amino aci
34	43	50.0	70	3	AAB12769	Aab12769 Human ins
35	43	50.0	70	3	AAB12772	Aab12772 Human ins
36	43	50.0	70	4	AAB35948	Aab35948 IGF-1A am
37	43	50.0	70	4	AAB35949	Aab35949 IGF-1B am
38	43	50.0	70	5	AAE18374	Aae18374 Human mat
39	43	50.0	70	5	AAM48217	Aam48217 Human ins
40	43	50.0	70	5	AAE27890	Aae27890 Human cod
41	43	50.0	70	5	AAE28004	Aae28004 Human cod
42	43	50.0	70	5	AAB71497	Aab71497 Human IGF
43	43	50.0	70	5	ABG76349	Abg76349 Human ful
44	43	50.0	70	5	AAU90781	Aau90781 Insulin/i
45	43	50.0	70	6	AAO16314	Aao16314 Insulin-l
46	43	50.0	71	1	AAP50872	Aap50872 Synthetic
47	43	50.0	71	1	AAP81203	Aap81203 Synthetic
48	43	50.0	71	1	AAP94729	Aap94729 Analogue
49	43	50.0	71	2	AAR05281	Aar05281 Amino aci
50	43	50.0	71	2	AAR21709	Aar21709 Insulin-l
51	43	50.0	71	4	AAG62611	Aag62611 Human ins
52	43	50.0	72	2	AAR63194	Aar63194 Insulin-l
53	43	50.0	74	2	AAR13759	Aar13759 Beta-gal/
54	43	50.0	75	2	AAR41776	Aar41776 Modified
55	43	50.0	76	2	AAR13758	Aar13758 Beta-gal
56	43	50.0	78	1	AAP81213	Aap81213 Insulin-l
57	43	50.0	83	2	AAR51454	Aar51454 Long R3 I
58	43	50.0	89	1	AAP40026	Aap40026 Fusion pr
59	43	50.0	90	1	AAP40024	Aap40024 Short fus
60	43	50.0	94	2	AAR53782	Aar53782 IGF-1 fus
61	43	50.0	94	2	AAR51474	Aar51474 lamB sign
62	43	50.0	95	2	AAR37549	Aar37549 Sequence
63	43	50.0	101	1	AAP82123	Aap82123 Fusion pr
64	43	50.0	105	4	AAE02450	Aae02450 Human liv
65	43	50.0	105	5	AAU10562	Aau10562 Human ins
66	43	50.0	105	7	ABR63170	Abr63170 Human liv
67	43	50.0	110	4	AAE02447	Aae02447 Human IGF
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70	43	50.0	118	2	AAW09772	Aaw09772 Killer to
71	43	50.0	131	2	AAR63193	Aar63193 hEGF-ST-I
72	43	50.0	133	1	AAP50927	Aap50927 Human ins
73	43	50.0	137	1	AAP50926	Aap50926 Human ins
74	43	50.0	137	1	AAP70101	Aap70101 Sequence
75	43	50.0	137	1	AAP70378	Aap70378 Protected
76	43	50.0	137	2	AAR66762	Aar66762 Protectin
77	43	50.0	137	4	AAU09067	Aau09067 Human ins
78	43	50.0	139	1	AAP50928	Aap50928 Human ins
79	43	50.0	153	2	AAR83803	Aar83803 Insulin-l
80	43	50.0	153	2	AAW69733	Aaw69733 Human IGF
81	43	50.0	153	2	AAW57882	Aaw57882 Human IGF
82	43	50.0	153	5	AAU84284	Aau84284 Human end
83	43	50.0	153	5	AAU84341	Aau84341 Protein I
84	43	50.0	153	6	ADA26451	Ada26451 Human ins
85	43	50.0	153	7	ADC59343	Adc59343 Human ins
86	43	50.0	153	7	ADD25494	Add25494 Binding d
87	43	50.0	154	2	AAR03626	Aar03626 Yeast alp
88	43	50.0	155	2	AAR37871	Aar37871 Yeast alp
89	43	50.0	155	2	AAW64067	Aaw64067 Chimeric
90	43	50.0	155	5	AAE24880	Aae24880 Yeast alp
91	43	50.0	156	2	AAW23302	Aaw23302 Human ins
92	43	50.0	158	2	AAR12138	Aar12138 Staphylok
93	43	50.0	165	1	AAP40025	Aap40025 Fusion pr
94	43	50.0	191	2	AAW64068	Aaw64068 Chimeric
95	43	50.0	191	5	AAE24881	Aae24881 Yeast alp
96	43	50.0	195	1	AAP70277	Aap70277 Sequence
97	43	50.0	235	1	AAP70259	Aap70259 Human rec
98	43	50.0	262	1	AAP40023	Aap40023 Fusion pr

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;       SOFTWARE:  patin (Genentech)
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  US/07/989,844
;       FILING DATE:  19921123
;       CLASSIFICATION:  435
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:
;       FILING DATE:
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Hasak, Janet E.
;       REGISTRATION NUMBER:  28,616
;       REFERENCE/DOCKET NUMBER:  811
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  415/225-1896
;       TELEFAX:  415/952-9881
;       TELEX:  910/371-7168
;   INFORMATION FOR SEQ ID NO:  12:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  94 amino acids
;       TYPE:  AMINO ACID
;       TOPOLOGY:  linear
US-07-989-844-12

  Query Match             50.0%;  Score 43;  DB 1;  Length 94;
  Best Local Similarity   100.0%;  Pred. No. 3e-38;
  Matches   43;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

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RESULT 25
US-08-161-044-12
; Sequence 12, Application US/08161044
; Patent No. 5410026
;  GENERAL INFORMATION:
;    APPLICANT:  Chang, Judy Yi-Huei
;    APPLICANT:  McFarland, Nancy C.
;    APPLICANT:  Swartz, James R.
;    TITLE OF INVENTION:  Method for Refolding Insoluble, Misfolded Insulin-Like Growth
;    NUMBER OF SEQUENCES:  12
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Genentech, Inc.
;      STREET:  460 Point San Bruno Blvd
;      CITY:  South San Francisco
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  94080
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  5.25 inch, 360 Kb floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  patin (Genentech)
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/161,044
;      FILING DATE:  02-DEC-1993
;      CLASSIFICATION:  530
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/808451
;      FILING DATE:  06-DEC-1991
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Hasak, Janet E.
;      REGISTRATION NUMBER:  28,616
;      REFERENCE/DOCKET NUMBER:  729C1
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  415/225-1896
;      TELEFAX:  415/952-9881
;      TELEX:  910/371-7168
;  INFORMATION FOR SEQ ID NO:  12:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  94 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
US-08-161-044-12

  Query Match             50.0%;  Score 43;  DB 1;  Length 94;
  Best Local Similarity   100.0%;  Pred. No. 3e-38;
  Matches   43;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

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Db         50 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 92


Search completed:  March  3, 2004, 12:11:43
Job time :  24 secs
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;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
;    HYPOTHETICAL:  NO
US-07-947-035-18

  Query Match             50.0%;  Score 43;  DB 1;  Length 83;
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  Matches   43;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
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Db         39 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 81


RESULT 22
US-08-321-585A-12
; Sequence 12, Application US/08321585A
; Patent No. 5679771
;  GENERAL INFORMATION:
;    APPLICANT:  Ballard, Francis
;    APPLICANT:  Read, Leanna
;    TITLE OF INVENTION:  METHOD FOR TREATING INTESTINAL DISEASES
;    NUMBER OF SEQUENCES:  12
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Merchant, Gould, Smith, Edell, Welter & Schmidt
;      STREET:  3100 No. 5679771west Center, 90 S. 7th Street
;      CITY:  Minneapolis
;      STATE:  MN
;      COUNTRY:  U.S.A.
;      ZIP:  55402
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/321,585A
;      FILING DATE:  11-OCT-1994
;      CLASSIFICATION:  514
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/854,983
;      FILING DATE:  28-APR-1992
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Hillson, Randall A
;      REGISTRATION NUMBER:  31,838
;      REFERENCE/DOCKET NUMBER:  6159.245USWO
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  612/332-5300
;      TELEFAX:  612/332/9081
;      TELEX:
;  INFORMATION FOR SEQ ID NO:  12:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  83 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  peptide
;    HYPOTHETICAL:  NO
;    ANTI-SENSE:  NO
;    FRAGMENT TYPE:  internal
;    ORIGINAL SOURCE:
US-08-321-585A-12

  Query Match             50.0%;  Score 43;  DB 1;  Length 83;
  Best Local Similarity   100.0%;  Pred. No. 2.6e-38;
  Matches   43;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
              |||||||||||||||||||||||||||||||||||||||||||
Db         39 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 81


RESULT 23
US-07-989-845-28
; Sequence 28, Application US/07989845
; Patent No. 5304472
;  GENERAL INFORMATION:
;    APPLICANT:  Bass, Steven
;    APPLICANT:  Swartz, James
;    TITLE OF INVENTION:  METHOD OF CONTROLLING POLYPEPTIDE
;    TITLE OF INVENTION:  PRODUCTION IN BACTERIAL CELLS
;    NUMBER OF SEQUENCES:  31
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Genentech, Inc.
;      STREET:  460 Point San Bruno Blvd
;      CITY:  South San Francisco
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  94080-4990
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  5.25 inch, 360 Kb floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  patin (Genentech)
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/07/989,845
;      FILING DATE:  19921120
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:
;      FILING DATE:
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Hasak, Janet E.
;      REGISTRATION NUMBER:  28,616
;      REFERENCE/DOCKET NUMBER:  752
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  415/225-1896
;      TELEFAX:  415/952-9881
;      TELEX:  910/371-7168
;  INFORMATION FOR SEQ ID NO:  28:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  94 amino acids
;      TYPE:  AMINO ACID
;      TOPOLOGY:  linear
US-07-989-845-28

  Query Match             50.0%;  Score 43;  DB 1;  Length 94;
  Best Local Similarity   100.0%;  Pred. No. 3e-38;
  Matches   43;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
              |||||||||||||||||||||||||||||||||||||||||||
Db         50 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 92


RESULT 24
US-07-989-844-12
; Sequence 12, Application US/07989844
; Patent No. 5342763
;  GENERAL INFORMATION:
;    APPLICANT:  Swartz, James
;    TITLE OF INVENTION:  Method for Producing Polypeptide via
;    TITLE OF INVENTION:  Bacterial Fermentation
;    NUMBER OF SEQUENCES:  21
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Genentech, Inc.
;      STREET:  460 Point San Bruno Blvd
;      CITY:  South San Francisco
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  94080-4990
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  5.25 inch, 360 Kb floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
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```
;    TITLE OF INVENTION:  MODIFIED INSULIN-LIKE GROWTH FACTOR
;    NUMBER OF SEQUENCES:  20
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25 (EPO)
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  PCT/US93/11458
;      FILING DATE:  24-NOV-1993
;      CLASSIFICATION:
;  INFORMATION FOR SEQ ID NO:  1:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  70 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  peptide
PCT-US93-11458-1

  Query Match             50.0%;  Score 43;  DB 5;  Length 70;
  Best Local Similarity   100.0%;  Pred. No. 2.3e-38;
  Matches   43;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
              |||||||||||||||||||||||||||||||||||||||||||
Db         26 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 68


RESULT 19
PCT-US95-08925-1
; Sequence 1, Application PC/TUS9508925
;  GENERAL INFORMATION:
;    APPLICANT:  CELTRIX PHARMACEUTICALS, INC.
;    TITLE OF INVENTION:  IGF/IGFBP COMPLEX FOR PROMOTING BONE
;    TITLE OF INVENTION:  FORMATION AND FOR REGULATING BONE REMODELING
;    NUMBER OF SEQUENCES:  7
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  MORRISON & FOERSTER
;      STREET:  755 Page Mill Road
;      CITY:  Palo Alto
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  94304-1018
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  PCT/US95/08925
;      FILING DATE:  NEW
;      CLASSIFICATION:
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  PARK, FREDDIE K.
;      REGISTRATION NUMBER:  35,636
;      REFERENCE/DOCKET NUMBER:  220952027240
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (415) 813-5600
;      TELEFAX:  (415) 494-0792
;      TELEX:  706141
;  INFORMATION FOR SEQ ID NO:  1:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  70 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
PCT-US95-08925-1

  Query Match             50.0%;  Score 43;  DB 5;  Length 70;
  Best Local Similarity   100.0%;  Pred. No. 2.3e-38;
  Matches   43;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
              |||||||||||||||||||||||||||||||||||||||||||
Db         26 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 68


RESULT 20
5470828-1
;Patent No. 5470828
;    APPLICANT: BALLARD, FRANCIS J.;WALLACE, JOHN C.;
;WELLS, JULIAN R.E.
;    TITLE OF INVENTION: PEPTIDE ANALOGS OF INSULIN-LIKE GROWTH
;FACTOR II
;    NUMBER OF SEQUENCES: 2
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/947,514
;      FILING DATE: 17-SEP-1992
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER: 408,518
;      FILING DATE: 24-AUG-1989
;SEQ ID NO:1:
;      LENGTH: 70
5470828-1

  Query Match             50.0%;  Score 43;  DB 6;  Length 70;
  Best Local Similarity   100.0%;  Pred. No. 2.3e-38;
  Matches   43;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
              |||||||||||||||||||||||||||||||||||||||||||
Db         26 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 68


RESULT 21
US-07-947-035-18
; Sequence 18, Application US/07947035
; Patent No. 5444045
;  GENERAL INFORMATION:
;    APPLICANT:  Francis, Geoffrey L.
;    APPLICANT:  Walton, Paul E.
;    APPLICANT:  Ballard, Francis J.
;    APPLICANT:  McMurty, John P.
;    APPLICANT:  Phelps, Patricia V.
;    TITLE OF INVENTION:  Method of Administering IGF-1, IGF-2,
;    TITLE OF INVENTION:  and Analogs Thereof to Birds
;    NUMBER OF SEQUENCES:  18
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Kenneth D. Sibley
;      STREET:  P.O. Drawer 34009
;      CITY:  Charlotte
;      STATE:  No. 5444045th Carolina
;      COUNTRY:  US
;      ZIP:  28234
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/07/947,035
;      FILING DATE:  17-SEP-1992
;      CLASSIFICATION:  514
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Sibley, Kenneth D.
;      REGISTRATION NUMBER:  31,665
;      REFERENCE/DOCKET NUMBER:  5175-59
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (919) 881-3140
;      TELEFAX:  (919) 881-3175
;      TELEX:  575102
;  INFORMATION FOR SEQ ID NO:  18:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  83 amino acids
;      TYPE:  amino acid
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; Patent No. 6403764
; GENERAL INFORMATION:
;  APPLICANT: Dubaquie, Yves
;  APPLICANT: Lowman, Henry
;  TITLE OF INVENTION: PROTEIN VARIANTS
;  FILE REFERENCE: P1712R1-1
;  CURRENT APPLICATION NUMBER: US/09/477,924
;  CURRENT FILING DATE: 2000-01-05
;  NUMBER OF SEQ ID NOS: 6
; SEQ ID NO 1
;   LENGTH: 70
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-477-924-1

  Query Match             50.0%;  Score 43;  DB 4;  Length 70;
  Best Local Similarity   100.0%;  Pred. No. 2.3e-38;
  Matches   43;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
              |||||||||||||||||||||||||||||||||||||||||||
Db         26 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 68


RESULT 15
US-09-723-981-1
; Sequence 1, Application US/09723981
; Patent No. 6506874
; GENERAL INFORMATION:
;  APPLICANT: Dubaquie, Yves
;  APPLICANT:  Lowman, Henry
;  TITLE OF INVENTION: PROTEIN VARIANTS
;  FILE REFERENCE: P1712R1
;  CURRENT APPLICATION NUMBER: US/09/723,981
;  CURRENT FILING DATE:  2000-11-28
;  PRIOR APPLICATION NUMBER: 09/477,923
;  PRIOR FILING DATE: 2000-01-05
;  NUMBER OF SEQ ID NOS: 6
; SEQ ID NO 1
;   LENGTH: 70
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-723-981-1

  Query Match             50.0%;  Score 43;  DB 4;  Length 70;
  Best Local Similarity   100.0%;  Pred. No. 2.3e-38;
  Matches   43;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
              |||||||||||||||||||||||||||||||||||||||||||
Db         26 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 68


RESULT 16
US-09-723-896-1
; Sequence 1, Application US/09723896
; Patent No. 6509443
; GENERAL INFORMATION:
;  APPLICANT: Dubaquie, Yves
;  APPLICANT:  Lowman, Henry
;  TITLE OF INVENTION: PROTEIN VARIANTS
;  FILE REFERENCE: P1712R1
;  CURRENT APPLICATION NUMBER: US/09/723,896
;  CURRENT FILING DATE:  2000-11-28
;  PRIOR APPLICATION NUMBER: US/09/477,923
;  PRIOR FILING DATE: 2000-01-05
;  NUMBER OF SEQ ID NOS: 6
; SEQ ID NO 1
;   LENGTH: 70
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-723-896-1

  Query Match             50.0%;  Score 43;  DB 4;  Length 70;
  Best Local Similarity   100.0%;  Pred. No. 2.3e-38;
  Matches   43;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
              |||||||||||||||||||||||||||||||||||||||||||
Db         26 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 68


RESULT 17
PCT-US92-09443A-1
; Sequence 1, Application PC/TUS9209443A
;  GENERAL INFORMATION:
;    APPLICANT:  Bozyczko-Coyne, Donna
;    APPLICANT:  Neff, Nicola
;    APPLICANT:  Lewis, Michael E.
;    APPLICANT:  Iqbal, Mohamed
;    TITLE OF INVENTION:  TREATING RETINAL NEURONAL
;    TITLE OF INVENTION:  DISORDERS BY THE APPLICATION OF
;    TITLE OF INVENTION:  INSULIN-LIKE GROWTH FACTORS AND
;    TITLE OF INVENTION:  ANALOGS
;    NUMBER OF SEQUENCES:  79
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Fish & Richardson
;      STREET:  225 Franklin Street
;      CITY:  Boston
;      STATE:  Massachusetts
;      COUNTRY:  U.S.A.
;      ZIP:  02110-2804
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
;      COMPUTER:  IBM PS/2 Model 50Z or 55SX
;      OPERATING SYSTEM:  MS-DOS (Version 5.0)
;      SOFTWARE:  WordPerfect (Version 5.1)
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  PCT/US92/09443A
;      FILING DATE:  19921103
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/790,690
;      FILING DATE:  November 8, 1991
;      APPLICATION NUMBER:  07/963,329
;      FILING DATE:  October 15, 1992
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Clark, Paul T.
;      REGISTRATION NUMBER:  30,162
;      REFERENCE/DOCKET NUMBER:  02655/012WO2
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (617) 542-5070
;      TELEFAX:  (617) 542-8906
;      TELEX:  200154
;  INFORMATION FOR SEQ ID NO:  1:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  70
;      TYPE:  AMINO ACID
;      STRANDEDNESS:  N/A
;      TOPOLOGY:  N/A
PCT-US92-09443A-1

  Query Match             50.0%;  Score 43;  DB 5;  Length 70;
  Best Local Similarity   100.0%;  Pred. No. 2.3e-38;
  Matches   43;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
              |||||||||||||||||||||||||||||||||||||||||||
Db         26 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 68


RESULT 18
PCT-US93-11458-1
; Sequence 1, Application PC/TUS9311458
;  GENERAL INFORMATION:
;    APPLICANT:
```

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;       REFERENCE/DOCKET NUMBER:  220952027203
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (650) 813-5600
;       TELEFAX:  (650) 494-0792
;       TELEX:  706141
;   INFORMATION FOR SEQ ID NO:  1:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  70 amino acids
;       TYPE:  amino acid
;       STRANDEDNESS:  single
;       TOPOLOGY:  linear
US-09-080-120A-1

  Query Match             50.0%;  Score 43;  DB 3;  Length 70;
  Best Local Similarity   100.0%;  Pred. No. 2.3e-38;
  Matches   43;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
              |||||||||||||||||||||||||||||||||||||||||||
Db         26 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 68


RESULT 12
US-08-432-517-1
; Sequence 1, Application US/08432517
; Patent No. 6083912
;  GENERAL INFORMATION:
;    APPLICANT:  KHOURI, ROGER K.
;    TITLE OF INVENTION:  METHOD FOR SOFT TISSUE AUGMENTATION
;    NUMBER OF SEQUENCES:  2
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  ROGERS, HOWELL & HAFERKAMP, L.C.
;      STREET:  7733 FORSYTH BOULEVARD, SUITE 1400
;      CITY:  ST. LOUIS
;      STATE:  MISSOURI
;      COUNTRY:  USA
;      ZIP:  63105-1817
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/432,517
;      FILING DATE:  01-MAY-1995
;      CLASSIFICATION:  514
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  HOLLAND, DONALD R.
;      REGISTRATION NUMBER:  35,197
;      REFERENCE/DOCKET NUMBER:  952584
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (314) 727-5188
;      TELEFAX:  (314) 727-6092
;  INFORMATION FOR SEQ ID NO:  1:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  70 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
;    HYPOTHETICAL:  NO
;    FEATURE:
;      NAME/KEY:  Disulfide-bond
;      LOCATION:  6..48
;      OTHER INFORMATION:  /note= "Disulfide bond between two
;      OTHER INFORMATION:  cysteines."
;    FEATURE:
;      NAME/KEY:  Disulfide-bond
;      LOCATION:  18..61
;      OTHER INFORMATION:  /note= "Disulfide bond between two
;      OTHER INFORMATION:  cysteines."
;    FEATURE:
;      NAME/KEY:  Disulfide-bond
;      LOCATION:  47..52
;      OTHER INFORMATION:  /note= "Disulfide bond between two
;      OTHER INFORMATION:  cysteines."
US-08-432-517-1

  Query Match             50.0%;  Score 43;  DB 3;  Length 70;
  Best Local Similarity   100.0%;  Pred. No. 2.3e-38;
  Matches   43;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
              |||||||||||||||||||||||||||||||||||||||||||
Db         26 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 68


RESULT 13
US-07-963-329A-1
; Sequence 1, Application US/07963329A
; Patent No. 6310040
;  GENERAL INFORMATION:
;    APPLICANT:  Bozyczko-Coyne, Donna
;    APPLICANT:  Neff, Nicola
;    APPLICANT:  Lewis, Michael E.
;    APPLICANT:  Iqbal, Mohamed
;    TITLE OF INVENTION:  TREATING RETINAL NEURONAL DISORDERS
;    TITLE OF INVENTION:  BY THE APPLICATION OF INSULIN-LIKE
;    TITLE OF INVENTION:  GROWTH FACTORS AND ANALOGS
;    NUMBER OF SEQUENCES:  79
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Fish & Richardson
;      STREET:  225 Franklin Street
;      CITY:  Boston
;      STATE:  Massachusetts
;      COUNTRY:  U.S.A.
;      ZIP:  02110-2804
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
;      COMPUTER:  IBM PS/2 Model 50Z or 55SX
;      OPERATING SYSTEM:  MS-DOS (Version 5.0)
;      SOFTWARE:  WordPerfect (Version 5.1)
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/07/963,329A
;      FILING DATE:  19921015
;      CLASSIFICATION:  514
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/790,690
;      FILING DATE:  No. 6310040ember 8, 1991
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Clark, Paul T.
;      REGISTRATION NUMBER:  30,162
;      REFERENCE/DOCKET NUMBER:  02655/012002
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (617) 542-5070
;      TELEFAX:  (617) 542-8906
;      TELEX:  200154
;  INFORMATION FOR SEQ ID NO:  1:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  70
;      TYPE:  amino acid
;      STRANDEDNESS:
;      TOPOLOGY:  linear
US-07-963-329A-1

  Query Match             50.0%;  Score 43;  DB 4;  Length 70;
  Best Local Similarity   100.0%;  Pred. No. 2.3e-38;
  Matches   43;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
              |||||||||||||||||||||||||||||||||||||||||||
Db         26 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 68


RESULT 14
US-09-477-924-1
; Sequence 1, Application US/09477924
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```
;       ADDRESSEE:  Fish & Richardson
;       STREET:  225 Franklin Street
;       CITY:  Boston
;       STATE:  Massachusetts
;       COUNTRY:  U.S.A.
;       ZIP:  02110-2804
;     COMPUTER READABLE FORM:
;       MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
;       COMPUTER:  IBM PS/2 Model 50Z or
;       COMPUTER:  55SX
;       OPERATING SYSTEM:  MS-DOS (Version 5.0)
;       SOFTWARE:  WordPerfect (Version
;       SOFTWARE:  5.1)
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  US/08/823,245
;       FILING DATE:  March 24, 1997
;       CLASSIFICATION:  514
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  07/361,595
;       FILING DATE:  June 6, 1989
;       APPLICATION NUMBER:  07/534,139
;       FILING DATE:  June 5, 1990
;       APPLICATION NUMBER:  07/869,913
;       FILING DATE:  April 15, 1992
;       APPLICATION NUMBER:  07/958,903
;       FILING DATE:  October 7, 1992
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Creeson, Gary L.
;       REGISTRATION NUMBER:  34,310
;       REFERENCE/DOCKET NUMBER:  02655/003008
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (617) 542-5070
;       TELEFAX:  (617) 542-8906
;       TELEX:  200154
;   INFORMATION FOR SEQ ID NO:  17:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  70
;       TYPE:  amino acid
;       STRANDEDNESS:  N/A
;       TOPOLOGY:  N/A
US-08-823-245-17

  Query Match             50.0%;  Score 43;  DB 1;  Length 70;
  Best Local Similarity   100.0%;  Pred. No. 2.3e-38;
  Matches   43;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
              |||||||||||||||||||||||||||||||||||||||||||
Db         26 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 68


RESULT 10
US-08-482-271-1
; Sequence 1, Application US/08482271
; Patent No. 5789547
;  GENERAL INFORMATION:
;    APPLICANT:  Sommer, Andreas
;    APPLICANT:  Ogawa, Yasushi
;    APPLICANT:  Tao, Peggy
;    TITLE OF INVENTION:  METHOD OF PRODUCING IGF-1 AND IGFBP-3
;    TITLE OF INVENTION:  WITH CORRECT FOLDING AND DISULFIDE BONDING
;    NUMBER OF SEQUENCES:  8
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  MORRISON & FOERSTER
;      STREET:  755 Page Mill Road
;      CITY:  Palo Alto
;      STATE:  CA
;      COUNTRY:  USA
;      ZIP:  94304-1018
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/482,271
;      FILING DATE:  07-JUN-1995
;      CLASSIFICATION:  530
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Park, Freddie K.
;      REGISTRATION NUMBER:  35,636
;      REFERENCE/DOCKET NUMBER:  22095-20284.00
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (415) 813-5600
;      TELEFAX:  (415) 494-0792
;      TELEX:  706141MRSN FOERS SFO
;  INFORMATION FOR SEQ ID NO:  1:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  70 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
US-08-482-271-1

  Query Match             50.0%;  Score 43;  DB 1;  Length 70;
  Best Local Similarity   100.0%;  Pred. No. 2.3e-38;
  Matches   43;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
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Db         26 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 68


RESULT 11
US-09-080-120A-1
; Sequence 1, Application US/09080120A
; Patent No. 6017885
;  GENERAL INFORMATION:
;    APPLICANT:  BAGI, CEDO M.
;    APPLICANT:  BROMMAGE, ROBERT
;    APPLICANT:  ROSEN, DAVID M.
;    APPLICANT:  ADAMS, STEVEN W.
;    TITLE OF INVENTION:  IGF/IGFBP COMPLEX FOR PROMOTING BONE
;    TITLE OF INVENTION:  FORMATION AND FOR REGULATING BONE REMODELING
;    NUMBER OF SEQUENCES:  7
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  MORRISON & FOERSTER
;      STREET:  755 Page Mill Road
;      CITY:  Palo Alto
;      STATE:  California
;      COUNTRY:  USA
;      ZIP:  94304-1018
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/080,120A
;      FILING DATE:  14-MAY-1998
;      CLASSIFICATION:  514
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/806,918
;      FILING DATE:  26-FEB-1997
;      CLASSIFICATION:  514
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/450,258
;      FILING DATE:  25-MAY-1995
;      CLASSIFICATION:  514
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/278,456
;      FILING DATE:  20-JUL-1994
;      CLASSIFICATION:  514
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Buffinger, Nicholas
;      REGISTRATION NUMBER:  39,124
```

; Patent No. 5652214
; GENERAL INFORMATION:
; APPLICANT: Lewis, Michael E.
; APPLICANT: Kauer, James C.
; APPLICANT: Smith, Kevin R.
; APPLICANT: Callison, Kathleen V.
; APPLICANT: Baldino, Frank
; APPLICANT: Neff, Nicola
; APPLICANT: Iqbal, Mohamed
; TITLE OF INVENTION: TREATING DISORDERS BY APPLICATION
; TITLE OF INVENTION: OF INSULIN-LIKE GROWTH FACTORS AND
; TITLE OF INVENTION: ANALOGS
; NUMBER OF SEQUENCES: 56
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Fish & Richardson
; STREET: 225 Franklin Street
; CITY: Boston
; STATE: Massachusetts
; COUNTRY: U.S.A.
; ZIP: 02110-2804
; COMPUTER READABLE FORM:
; MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
; COMPUTER: IBM PS/2 Model 50Z or 55SX
; OPERATING SYSTEM: MS-DOS (Version 5.0)
; SOFTWARE: WordPerfect (Version 5.1)
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/958,903A
; FILING DATE: October 7, 1992
; CLASSIFICATION: 514
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 07/361,595
; FILING DATE: June 5, 1989
; APPLICATION NUMBER: 07/534,139
; FILING DATE: June 5, 1990
; APPLICATION NUMBER: 07/869,913
; FILING DATE: April 15, 1992
; ATTORNEY/AGENT INFORMATION:
; NAME: Clark, Paul T.
; REGISTRATION NUMBER: 30,162
; REFERENCE/DOCKET NUMBER: 02655/003004
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (617) 542-5070
; TELEFAX: (617) 542-8906
; TELEX: 200154
; INFORMATION FOR SEQ ID NO: 17:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 70
; TYPE: amino acid
; STRANDEDNESS:
; TOPOLOGY: linear
US-07-958-903A-17

Query Match 50.0%; Score 43; DB 1; Length 70;
Best Local Similarity 100.0%; Pred. No. 2.3e-38;
Matches 43; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
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Db 26 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 68

RESULT 8
US-08-462-018-17
; Sequence 17, Application US/08462018
; Patent No. 5703045
; GENERAL INFORMATION:
; APPLICANT: Lewis, Michael E.
; APPLICANT: Kauer, James C.
; APPLICANT: Smith, Kevin R.
; APPLICANT: Callison, Kathleen V.
; APPLICANT: Baldino, Frank
; APPLICANT: Neff, Nicola
; APPLICANT: Iqbal, Mohamed
; TITLE OF INVENTION: TREATING DISORDERS BY APPLICATION
; TITLE OF INVENTION: OF INSULIN-LIKE GROWTH FACTORS AND
; TITLE OF INVENTION: ANALOGS
; NUMBER OF SEQUENCES: 56
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Fish & Richardson P.C.
; STREET: 225 Franklin Street
; CITY: Boston
; STATE: Massachusetts
; COUNTRY: U.S.A.
; ZIP: 02110-2804
; COMPUTER READABLE FORM:
; MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
; COMPUTER: IBM PS/2 Model 50Z or 55SX
; OPERATING SYSTEM: MS-DOS (Version 5.0)
; SOFTWARE: WordPerfect (Version 5.1)
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/462,018
; FILING DATE:
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 07/958,903
; FILING DATE: October 7, 1992
; APPLICATION NUMBER: 07/361,595
; FILING DATE: June 5, 1989
; APPLICATION NUMBER: 07/534,139
; FILING DATE: June 5, 1990
; APPLICATION NUMBER: 07/869,913
; FILING DATE: April 15, 1992
; ATTORNEY/AGENT INFORMATION:
; NAME: Clark, Paul T.
; REGISTRATION NUMBER: 30,162
; REFERENCE/DOCKET NUMBER: 02655/003005
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (617) 542-5070
; TELEFAX: (617) 542-8906
; TELEX: 200154
; INFORMATION FOR SEQ ID NO: 17:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 70
; TYPE: amino acid
; STRANDEDNESS:
; TOPOLOGY: linear
US-08-462-018-17

Query Match 50.0%; Score 43; DB 1; Length 70;
Best Local Similarity 100.0%; Pred. No. 2.3e-38;
Matches 43; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
||||||||||||||||||||||||||||||||||||||||||||
Db 26 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 68

RESULT 9
US-08-823-245-17
; Sequence 17, Application US/08823245
; Patent No. 5776897
; GENERAL INFORMATION:
; APPLICANT: Lewis, Michael
; APPLICANT: Kauer, James C.
; APPLICANT: Smith, Kevin R.
; APPLICANT: Callison, Kathleen V.
; APPLICANT: Baldino, Frank
; APPLICANT: Neff, Nicola
; APPLICANT: Iqbal, Mohamed
; TITLE OF INVENTION: TREATING DISORDERS BY
; TITLE OF INVENTION: APPLICATION
; TITLE OF INVENTION: OF INSULIN-LIKE GROWTH
; TITLE OF INVENTION: FACTORS AND
; TITLE OF INVENTION: ANALOGS
; NUMBER OF SEQUENCES: 56
; CORRESPONDENCE ADDRESS:

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;       NAME/KEY:  Cleavage-site
;       LOCATION:  (55^56)
;       OTHER INFORMATION:  /note= "trypsin cleavage site"
;     FEATURE:
;       NAME/KEY:  Cleavage-site
;       LOCATION:  (56^57)
;       OTHER INFORMATION:  /note= "trypsin cleavage site"
;     FEATURE:
;       NAME/KEY:  Cleavage-site
;       LOCATION:  (60^61)
;       OTHER INFORMATION:  /note= "trypsin cleavage site"
;     FEATURE:
;       NAME/KEY:  Cleavage-site
;       LOCATION:  (68^69)
;       OTHER INFORMATION:  /note= "trypsin cleavage site"
;     FEATURE:
;       NAME/KEY:  Cross-links
;       LOCATION:  6..48
;     FEATURE:
;       NAME/KEY:  Cross-links
;       LOCATION:  18..61
;     FEATURE:
;       NAME/KEY:  Cross-links
;       LOCATION:  47..52
US-07-654-611-2

  Query Match             50.0%;  Score 43;  DB 1;  Length 70;
  Best Local Similarity   100.0%;  Pred. No. 2.3e-38;
  Matches   43;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
              |||||||||||||||||||||||||||||||||||||||||||
Db         26 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 68


RESULT 5
US-07-947-035-1
; Sequence 1, Application US/07947035
; Patent No. 5444045
;  GENERAL INFORMATION:
;    APPLICANT:  Francis, Geoffrey L.
;    APPLICANT:  Walton, Paul E.
;    APPLICANT:  Ballard, Francis J.
;    APPLICANT:  McMurty, John P.
;    APPLICANT:  Phelps, Patricia V.
;    TITLE OF INVENTION:  Method of Administering IGF-1, IGF-2,
;    TITLE OF INVENTION:  and Analogs Thereof to Birds
;    NUMBER OF SEQUENCES:  18
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Kenneth D. Sibley
;      STREET:  P.O. Drawer 34009
;      CITY:  Charlotte
;      STATE:  No. 5444045th Carolina
;      COUNTRY:  US
;      ZIP:  28234
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/07/947,035
;      FILING DATE:  17-SEP-1992
;      CLASSIFICATION:  514
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Sibley, Kenneth D.
;      REGISTRATION NUMBER:  31,665
;      REFERENCE/DOCKET NUMBER:  5175-59
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (919) 881-3140
;      TELEFAX:  (919) 881-3175
;      TELEX:  575102
;  INFORMATION FOR SEQ ID NO:  1:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  70 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
;    HYPOTHETICAL:  NO
US-07-947-035-1

  Query Match             50.0%;  Score 43;  DB 1;  Length 70;
  Best Local Similarity   100.0%;  Pred. No. 2.3e-38;
  Matches   43;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
              |||||||||||||||||||||||||||||||||||||||||||
Db         26 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 68


RESULT 6
US-07-776-272-17
; Sequence 17, Application US/07776272
; Patent No. 5612454
;  GENERAL INFORMATION:
;    APPLICANT:  Kaminuma, Toshihiko
;    APPLICANT:  Iida, Toshii
;    APPLICANT:  Tajima, Masahiro
;    TITLE OF INVENTION:  Process for Purification of Polypeptide
;    NUMBER OF SEQUENCES:  31
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Wegner, Cantor, Mueller & Player
;      STREET:  1233 20th St. N.W.  P.O. Box 18218
;      CITY:  Washington
;      STATE:  District of Columbia
;      COUNTRY:  United States of America
;      ZIP:  20036-8218
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/07/776,272
;      FILING DATE:  19911129
;      CLASSIFICATION:  530
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Player, William E
;      REGISTRATION NUMBER:  31,409
;      REFERENCE/DOCKET NUMBER:  P-450-23167
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  202-887-0400
;      TELEFAX:  202-887-0605
;      TELEX:  440706
;  INFORMATION FOR SEQ ID NO:  17:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  70 amino acids
;      TYPE:  AMINO ACID
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  peptide
;    HYPOTHETICAL:  YES
US-07-776-272-17

  Query Match             50.0%;  Score 43;  DB 1;  Length 70;
  Best Local Similarity   100.0%;  Pred. No. 2.3e-38;
  Matches   43;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
              |||||||||||||||||||||||||||||||||||||||||||
Db         26 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 68


RESULT 7
US-07-958-903A-17
; Sequence 17, Application US/07958903A
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;       APPLICATION NUMBER:  PCT/US92/09443A
;       FILING DATE:  19921103
;       CLASSIFICATION:
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  07/790,690
;       FILING DATE:  November 8, 1991
;       APPLICATION NUMBER:  07/963,329
;       FILING DATE:  October 15, 1992
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Clark, Paul T.
;       REGISTRATION NUMBER:  30,162
;       REFERENCE/DOCKET NUMBER:  02655/012WO2
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (617) 542-5070
;       TELEFAX:  (617) 542-8906
;       TELEX:  200154
;   INFORMATION FOR SEQ ID NO:  2:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  67
;       TYPE:  AMINO ACID
;       STRANDEDNESS:  N/A
;       TOPOLOGY:  N/A
PCT-US92-09443A-2

  Query Match             50.0%;  Score 43;  DB 5;  Length 67;
  Best Local Similarity   100.0%;  Pred. No. 2.2e-38;
  Matches   43;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
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Db         23 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 65


RESULT 4
US-07-654-611-2
; Sequence 2, Application US/07654611
; Patent No. 5273966
;  GENERAL INFORMATION:
;     APPLICANT:  Sknottner-Lundin, Anna
;     APPLICANT:  Fryklund, Linda
;     APPLICANT:  Gellerfors, Par
;     TITLE OF INVENTION:  O-Glycosylated IGF-1
;     NUMBER OF SEQUENCES:  2
;     CORRESPONDENCE ADDRESS:
;       ADDRESSEE:  Pollock, Vande Sande and Priddy
;       STREET:  1990 M Street, NW Suite 800
;       CITY:  Washington
;       STATE:  DC
;       COUNTRY:  US
;       ZIP:  20036
;     COMPUTER READABLE FORM:
;       MEDIUM TYPE:  Floppy disk
;       COMPUTER:  IBM PC compatible
;       OPERATING SYSTEM:  PC-DOS/MS-DOS
;       SOFTWARE:  PatentIn Release #1.0, Version #1.25
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  US/07/654,611
;       FILING DATE:  19910422
;       CLASSIFICATION:  435
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  GB 8819826.2
;       FILING DATE:  20-AUG-1988
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  PCT/EP89/00972
;       FILING DATE:  17-AUG-1989
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Amernick, Burton A.
;       REGISTRATION NUMBER:  24,852
;       REFERENCE/DOCKET NUMBER:  151/031
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (202)331-7111
;       TELEFAX:  (202)223-2596
;       TELEX:  248587 RING
;   INFORMATION FOR SEQ ID NO:  2:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  70 amino acids
;       TYPE:  AMINO ACID
;       TOPOLOGY:  linear
;     MOLECULE TYPE:  protein
;     FEATURE:
;       NAME/KEY:  Protein
;       LOCATION:  1..70
;       OTHER INFORMATION:  /label= IGF-1
;     FEATURE:
;       NAME/KEY:  Binding-site
;       LOCATION:  4
;       OTHER INFORMATION:  /note= "potential glycosylation
;       OTHER INFORMATION:  site"
;     FEATURE:
;       NAME/KEY:  Binding-site
;       LOCATION:  29
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;       NAME/KEY:  Binding-site
;       LOCATION:  one-of(33, 34, 35)
;       OTHER INFORMATION:  /note= "potential glycosylation
;       OTHER INFORMATION:  sites"
;     FEATURE:
;       NAME/KEY:  Binding-site
;       LOCATION:  41
;       OTHER INFORMATION:  /note= "potential glycosylation
;       OTHER INFORMATION:  site"
;     FEATURE:
;       NAME/KEY:  Binding-site
;       LOCATION:  51
;       OTHER INFORMATION:  /note= "potential glycosylation
;       OTHER INFORMATION:  site"
;     FEATURE:
;       NAME/KEY:  Binding-site
;       LOCATION:  69
;       OTHER INFORMATION:  /note= "potential glycosylation
;       OTHER INFORMATION:  site"
;     FEATURE:
;       NAME/KEY:  Cleavage-site
;       LOCATION:  (21^22)
;       OTHER INFORMATION:  /note= "trypsin cleavage site"
;     FEATURE:
;       NAME/KEY:  Cleavage-site
;       LOCATION:  (24^25)
;       OTHER INFORMATION:  /note= "trypsin cleavage site"
;     FEATURE:
;       NAME/KEY:  Cleavage-site
;       LOCATION:  (29^30)
;       OTHER INFORMATION:  /note= "trypsin cleavage site"
;     FEATURE:
;       NAME/KEY:  Cleavage-site
;       LOCATION:  (31^32)
;       OTHER INFORMATION:  /note= "trypsin cleavage site"
;     FEATURE:
;       NAME/KEY:  Cleavage-site
;       LOCATION:  (36^37)
;       OTHER INFORMATION:  /note= "trypsin cleavage site"
;     FEATURE:
;       NAME/KEY:  Cleavage-site
;       LOCATION:  (37^38)
;       OTHER INFORMATION:  /note= "trypsin cleavage site"
;     FEATURE:
;       NAME/KEY:  Cleavage-site
;       LOCATION:  (41^42)
;       OTHER INFORMATION:  /note= "trypsin cleavage site"
;     FEATURE:
;       NAME/KEY:  Cleavage-site
;       LOCATION:  (50^51)
;       OTHER INFORMATION:  /note= "trypsin cleavage site"
;     FEATURE:
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ALIGNMENTS

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RESULT 1
US-09-142-583A-4
; Sequence 4, Application US/09142583A
; Patent No. 6221842
;  GENERAL INFORMATION:
;       APPLICANT: GOLDSPINK, GEOFFREY
;       TITLE OF INVENTION: METHOD OF TREATING MUSCULAR DISORDERS
;       NUMBER OF SEQUENCES: 11
;       CORRESPONDENCE ADDRESS:
;            ADDRESSEE: NIXON & VANDERHYE P.C.
;            STREET: 1100 NORTH GLEBE ROAD
;            CITY: ARLINGTON
;            STATE: VA
;            COUNTRY: USA
;            ZIP: 22201
;       COMPUTER READABLE FORM:
;            MEDIUM TYPE: Floppy disk
;            COMPUTER: IBM PC compatible
;            OPERATING SYSTEM: PC-DOS/MS-DOS
;            SOFTWARE: PatentIn Release #1.0, Version #1.25
;       CURRENT APPLICATION DATA:
;            APPLICATION NUMBER: US/09/142,583A
;            FILING DATE: 29-Oct-1998
;            CLASSIFICATION: <Unknown>
;       PRIOR APPLICATION DATA:
;            APPLICATION NUMBER: WO PCT/GB97/00658
;            FILING DATE: 11-MAR-1997
;            APPLICATION NUMBER: GB 9605124.8
;            FILING DATE: 11-MAR-1996
;       ATTORNEY/AGENT INFORMATION:
;            NAME: SADOFF, B. J.
;            REGISTRATION NUMBER: 36663
;            REFERENCE/DOCKET NUMBER: 117-263
;       TELECOMMUNICATION INFORMATION:
;            TELEPHONE: 7038164000
;            TELEFAX: 7038164100
;  INFORMATION FOR SEQ ID NO: 4:
;       SEQUENCE CHARACTERISTICS:
;            LENGTH: 121 amino acids
;            TYPE: amino acid
;            TOPOLOGY: linear
;       MOLECULE TYPE: protein
;       SEQUENCE DESCRIPTION: SEQ ID NO: 4:
US-09-142-583A-4

  Query Match            100.0%;  Score 86;  DB 3;  Length 121;
  Best Local Similarity  100.0%;  Pred. No. 8e-84;
  Matches   86;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

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Qy         61 KYQPPSTNKKMKSQRRRKGSTFEEHK 86
              ||||||||||||||||||||||||||
Db         96 KYQPPSTNKKMKSQRRRKGSTFEEHK 121


RESULT 2
US-07-963-329A-2
; Sequence 2, Application US/07963329A
; Patent No. 6310040
;  GENERAL INFORMATION:
;    APPLICANT:  Bozyczko-Coyne, Donna
;    APPLICANT:  Neff, Nicola
;    APPLICANT:  Lewis, Michael E.
;    APPLICANT:  Iqbal, Mohamed
;    TITLE OF INVENTION:  TREATING RETINAL NEURONAL DISORDERS
;    TITLE OF INVENTION:  BY THE APPLICATION OF INSULIN-LIKE
;    TITLE OF INVENTION:  GROWTH FACTORS AND ANALOGS
;    NUMBER OF SEQUENCES:  79
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Fish & Richardson
;      STREET:  225 Franklin Street
;      CITY:  Boston
;      STATE:  Massachusetts
;      COUNTRY:  U.S.A.
;      ZIP:  02110-2804
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
;      COMPUTER:  IBM PS/2 Model 50Z or 55SX
;      OPERATING SYSTEM:  MS-DOS (Version 5.0)
;      SOFTWARE:  WordPerfect (Version 5.1)
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/07/963,329A
;      FILING DATE:  19921015
;      CLASSIFICATION:  514
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/790,690
;      FILING DATE:  No. 6310040ember 8, 1991
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Clark, Paul T.
;      REGISTRATION NUMBER:  30,162
;      REFERENCE/DOCKET NUMBER:  02655/012002
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (617) 542-5070
;      TELEFAX:  (617) 542-8906
;      TELEX:  200154
;  INFORMATION FOR SEQ ID NO:  2:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  67
;      TYPE:  amino acid
;      STRANDEDNESS:
;      TOPOLOGY:  linear
US-07-963-329A-2

  Query Match            50.0%;  Score 43;  DB 4;  Length 67;
  Best Local Similarity  100.0%;  Pred. No. 2.2e-38;
  Matches   43;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
              |||||||||||||||||||||||||||||||||||||||||||
Db         23 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 65


RESULT 3
PCT-US92-09443A-2
; Sequence 2, Application PC/TUS9209443A
;  GENERAL INFORMATION:
;    APPLICANT:  Bozyczko-Coyne, Donna
;    APPLICANT:  Neff, Nicola
;    APPLICANT:  Lewis, Michael E.
;    APPLICANT:  Iqbal, Mohamed
;    TITLE OF INVENTION:  TREATING RETINAL NEURONAL
;    TITLE OF INVENTION:  DISORDERS BY THE APPLICATION OF
;    TITLE OF INVENTION:  INSULIN-LIKE GROWTH FACTORS AND
;    TITLE OF INVENTION:  ANALOGS
;    NUMBER OF SEQUENCES:  79
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Fish & Richardson
;      STREET:  225 Franklin Street
;      CITY:  Boston
;      STATE:  Massachusetts
;      COUNTRY:  U.S.A.
;      ZIP:  02110-2804
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
;      COMPUTER:  IBM PS/2 Model 50Z or 55SX
;      OPERATING SYSTEM:  MS-DOS (Version 5.0)
;      SOFTWARE:  WordPerfect (Version 5.1)
;    CURRENT APPLICATION DATA:
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GenCore version 5.1.6

OM protein - protein search, using sw model

Run on: March 3, 2004, 12:08:17 ; Search time 23 Seconds
(without alignments)
193.036 Million cell updates/sec

Title: US-09-852-261-6_COPY_26_111
Perfect score: 86
Sequence: 1 NKPTGYGSSSRRAPQTGIVD.....TNKKMKSQRRRKGSTFEEHK 86

Scoring table: OLIGO
Gapop 60.0 , Gapext 60.0

Searched: 389414 seqs, 51625971 residues

Word size : 0

Total number of hits satisfying chosen parameters: 389414

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Listing first 100 summaries

Database : Issued_Patents_AA:*
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3: /cgn2_6/ptodata/2/iaa/6A_COMB.pep:*
4: /cgn2_6/ptodata/2/iaa/6B_COMB.pep:*
5: /cgn2_6/ptodata/2/iaa/PCTUS_COMB.pep:*
6: /cgn2_6/ptodata/2/iaa/backfiles1.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	86	100.0	121	3	US-09-142-583A-4	Sequence 4, Appli
2	43	50.0	67	4	US-07-963-329A-2	Sequence 2, Appli
3	43	50.0	67	5	PCT-US92-09443A-2	Sequence 2, Appli
4	43	50.0	70	1	US-07-654-611-2	Sequence 2, Appli
5	43	50.0	70	1	US-07-947-035-1	Sequence 1, Appli
6	43	50.0	70	1	US-07-776-272-17	Sequence 17, Appl
7	43	50.0	70	1	US-07-958-903A-17	Sequence 17, Appl
8	43	50.0	70	1	US-08-462-018-17	Sequence 17, Appl
9	43	50.0	70	1	US-08-823-245-17	Sequence 17, Appl
10	43	50.0	70	1	US-08-482-271-1	Sequence 1, Appli
11	43	50.0	70	3	US-09-080-120A-1	Sequence 1, Appli
12	43	50.0	70	3	US-08-432-517-1	Sequence 1, Appli
13	43	50.0	70	4	US-07-963-329A-1	Sequence 1, Appli
14	43	50.0	70	4	US-09-477-924-1	Sequence 1, Appli
15	43	50.0	70	4	US-09-723-981-1	Sequence 1, Appli
16	43	50.0	70	4	US-09-723-896-1	Sequence 1, Appli
17	43	50.0	70	5	PCT-US92-09443A-1	Sequence 1, Appli
18	43	50.0	70	5	PCT-US93-11458-1	Sequence 1, Appli
19	43	50.0	70	5	PCT-US95-08925-1	Sequence 1, Appli
20	43	50.0	70	6	5470828-1	Patent No. 5470828
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22	43	50.0	83	1	US-08-321-585A-12	Sequence 12, Appl
23	43	50.0	94	1	US-07-989-845-28	Sequence 28, Appl
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27	43	50.0	94	1	US-08-451-241-12	Sequence 12, Appl
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29	43	50.0	94	5	PCT-US93-11298-28	Sequence 28, Appl
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31	43	50.0	137	1	US-07-953-230A-10	Sequence 10, Appl
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36	43	50.0	155	1	US-08-328-961-8	Sequence 8, Appli
37	43	50.0	155	1	US-08-462-397-8	Sequence 8, Appli
38	43	50.0	155	3	US-08-989-251-39	Sequence 39, Appl
39	43	50.0	155	3	US-09-340-250-39	Sequence 39, Appl
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41	43	50.0	156	3	US-09-142-583A-11	Sequence 11, Appl
42	43	50.0	191	3	US-08-989-251-41	Sequence 41, Appl
43	43	50.0	191	3	US-09-340-250-41	Sequence 41, Appl
44	43	50.0	191	4	US-09-528-108-41	Sequence 41, Appl
45	43	50.0	953	4	US-09-255-829-14	Sequence 14, Appl
46	39	45.3	78	2	US-08-460-890A-47	Sequence 47, Appl
47	39	45.3	78	3	US-08-167-641C-47	Sequence 47, Appl
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56	37	43.0	95	4	US-09-723-931-18	Sequence 18, Appl
57	37	43.0	95	4	US-09-723-873-18	Sequence 18, Appl
58	37	43.0	95	4	US-09-724-114-18	Sequence 18, Appl
59	37	43.0	95	4	US-09-723-913-18	Sequence 18, Appl
60	36	41.9	38	6	5470721-4	Patent No. 5470721
61	34	39.5	36	6	5489517-4	Patent No.5489517
62	31	36.0	70	1	US-08-180-572-5	Sequence 5, Appli
63	30	34.9	68	4	US-09-201-227A-44	Sequence 44, Appl
64	29	33.7	68	4	US-09-201-227A-22	Sequence 22, Appl
65	29	33.7	68	4	US-09-084-303B-218	Sequence 218, App
66	28	32.6	119	6	5405942-1	Patent No. 5405942
67	21	24.4	21	1	US-08-435-252-3	Sequence 3, Appli
68	21	24.4	50	6	5436136-16	Patent No. 5436136
69	17	19.8	17	3	US-09-142-583A-7	Sequence 7, Appli
70	16	18.6	18	4	US-07-963-329A-3	Sequence 3, Appli
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72	16	18.6	20	1	US-07-958-903A-15	Sequence 15, Appl
73	16	18.6	20	1	US-08-462-018-15	Sequence 15, Appl
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75	16	18.6	20	4	US-07-963-329A-65	Sequence 65, Appl
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93	14	16.3	16	1	US-08-823-245-4	Sequence 4, Appli
94	14	16.3	16	4	US-07-963-329A-67	Sequence 67, Appl
95	14	16.3	16	5	PCT-US92-09443A-67	Sequence 67, Appl
96	14	16.3	16	5	PCT-US93-05203-1	Sequence 1, Appli
97	14	16.3	18	1	US-07-958-903A-12	Sequence 12, Appl
98	14	16.3	18	1	US-08-462-018-12	Sequence 12, Appl
99	14	16.3	18	1	US-08-823-245-12	Sequence 12, Appl
100	14	16.3	18	4	US-07-963-329A-62	Sequence 62, Appl

; Sequence 3, Application US/10136639
; Publication No. US20030072761A1
; GENERAL INFORMATION:
; APPLICANT: LeBowitz, Jonathan
; TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR TARGETING PROTEINS ACROSS THE BLOOD
; TITLE OF INVENTION: BARRIER
; FILE REFERENCE: SYM-008
; CURRENT APPLICATION NUMBER: US/10/136,639
; CURRENT FILING DATE: 2002-09-06
; PRIOR APPLICATION NUMBER: US 60/329,650
; PRIOR FILING DATE: 2001-10-16
; NUMBER OF SEQ ID NOS: 4
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 3
; LENGTH: 153
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-136-639-3

Query Match 50.0%; Score 43; DB 14; Length 153;
Best Local Similarity 100.0%; Pred. No. 5.6e-34;
Matches 43; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Db 74 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 116

RESULT 23
US-10-238-114-2
; Sequence 2, Application US/10238114
; Publication No. US20030100073A1
; GENERAL INFORMATION:
; APPLICANT: Merial
; APPLICANT: ANDREONI , Christine Michele
; TITLE OF INVENTION: IGF-1 AS FELINE VACCINE ADJUVANT, IN PARTICULAR AGAINST FELINE RE
; FILE REFERENCE: 454313-3165.1
; CURRENT APPLICATION NUMBER: US/10/238,114
; CURRENT FILING DATE: 2002-09-10
; PRIOR APPLICATION NUMBER: FR 01 11736
; PRIOR FILING DATE: 2001-09-11
; PRIOR APPLICATION NUMBER: US 60/318,666
; PRIOR FILING DATE: 2001-09-12
; NUMBER OF SEQ ID NOS: 20
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 2
; LENGTH: 153
; TYPE: PRT
; ORGANISM: Felis catus
US-10-238-114-2

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Best Local Similarity 100.0%; Pred. No. 5.6e-34;
Matches 43; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
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Db 74 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 116

RESULT 24
US-10-207-655-55
; Sequence 55, Application US/10207655
; Publication No. US20030118592A1
; GENERAL INFORMATION:
; APPLICANT: Ledbetter, Jeffrey A.
; APPLICANT: Hayden-Ledbetter, Martha S.
; TITLE OF INVENTION: BINDING DOMAIN-IMMUNOGLOBULIN FUSION PROTEINS
; FILE REFERENCE: 390069.401C1
; CURRENT APPLICATION NUMBER: US/10/207,655
; CURRENT FILING DATE: 2002-07-25
; NUMBER OF SEQ ID NOS: 426
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 55
; LENGTH: 153
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-207-655-55

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Best Local Similarity 100.0%; Pred. No. 5.6e-34;
Matches 43; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Db 74 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 116

RESULT 25
US-09-921-398-39
; Sequence 39, Application US/09921398
; Patent No. US20020055169A1
; GENERAL INFORMATION:
; APPLICANT: Tekamp-Olson, Patricia
; TITLE OF INVENTION: METHOD FOR EXPRESSION OF HETEROLOGOUS
; PROTEINS IN YEAST
; NUMBER OF SEQUENCES: 41
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Bell Seltzer IP Group of Alston & Bird, LLP
; STREET: 3605 Glenwood Ave. Suite 310
; CITY: Raleigh
; STATE: NC
; COUNTRY: US
; ZIP: 27622
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/921,398
; FILING DATE: 02-Aug-2001
; CLASSIFICATION: <Unknown>
; ATTORNEY/AGENT INFORMATION:
; NAME: Spruill, W. Murray
; REGISTRATION NUMBER: 32,943
; REFERENCE/DOCKET NUMBER: 5784-4
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 919 420 2202
; TELEFAX: 919 881 3175
; INFORMATION FOR SEQ ID NO: 39:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 155 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; SEQUENCE DESCRIPTION: SEQ ID NO: 39:
US-09-921-398-39

Query Match 50.0%; Score 43; DB 9; Length 155;
Best Local Similarity 100.0%; Pred. No. 5.7e-34;
Matches 43; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Search completed: March 3, 2004, 12:16:07
Job time : 35 secs

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; GENERAL INFORMATION:
;  APPLICANT: GOLDSPINK, GEOFFREY
;  APPLICANT:  TERENGHI, GIORGIO
;  TITLE OF INVENTION: REPAIR OF NERVE DAMAGE
;  FILE REFERENCE: 117-351
;  CURRENT APPLICATION NUMBER: US/09/852,261
;  CURRENT FILING DATE:  2001-05-10
;  PRIOR APPLICATION NUMBER: GB 0011278.9
;  PRIOR FILING DATE: 2000-05-10
;  NUMBER OF SEQ ID NOS: 14
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 2
;   LENGTH: 110
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-852-261-2

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  Best Local Similarity   100.0%;  Pred. No. 4.3e-34;
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Db         26 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 68


RESULT 19
US-10-179-046-14
; Sequence 14, Application US/10179046
; Publication No. US20030013154A1
;   GENERAL INFORMATION:
;        APPLICANT: Crawford, Kenneth
;                   Zaror, Isabel
;                   Innis, Michael
;        TITLE OF INVENTION: Pichia Secretory Leader for Protein
;                            Expression
;        NUMBER OF SEQUENCES: 40
;        CORRESPONDENCE ADDRESS:
;             ADDRESSEE: Chiron Corporation
;             STREET: 4560 Horton Street
;             CITY: Emeryville
;             STATE: California
;             COUNTRY: United States
;             ZIP: 94608
;        COMPUTER READABLE FORM:
;             MEDIUM TYPE: Floppy disk
;             COMPUTER: IBM PC compatible
;             OPERATING SYSTEM: PC-DOS/MS-DOS
;             SOFTWARE: PatentIn Release #1.0, Version #1.30
;        CURRENT APPLICATION DATA:
;             APPLICATION NUMBER: US/10/179,046
;             FILING DATE: 25-Jun-2002
;             CLASSIFICATION: <Unknown>
;        PRIOR APPLICATION DATA:
;             APPLICATION NUMBER: US/09/029,267
;             FILING DATE: <Unknown>
;        ATTORNEY/AGENT INFORMATION:
;             NAME: Chung, Ling-Fong
;             REGISTRATION NUMBER: 36,482
;             REFERENCE/DOCKET NUMBER: 1165.100
;        TELECOMMUNICATION INFORMATION:
;             TELEPHONE: (510) 601-2704
;             TELEFAX: (510) 655-3542
;   INFORMATION FOR SEQ ID NO: 14:
;        SEQUENCE CHARACTERISTICS:
;             LENGTH: 118 amino acids
;             TYPE: amino acid
;             STRANDEDNESS: single
;             TOPOLOGY: linear
;        MOLECULE TYPE: protein
;        SEQUENCE DESCRIPTION: SEQ ID NO: 14:
US-10-179-046-14

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  Matches   43;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

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RESULT 20
US-10-251-661-8
; Sequence 8, Application US/10251661
; Publication No. US20030166555A1
; GENERAL INFORMATION:
;  APPLICANT: Alberini, Cristina M.
;  APPLICANT:  Bear, Mark F.
;  TITLE OF INVENTION: Methods and Compositions for Regulating
;  TITLE OF INVENTION:  Memory Consolidation
;  FILE REFERENCE: 3499.1001-003
;  CURRENT APPLICATION NUMBER: US/10/251,661
;  CURRENT FILING DATE:  2002-09-20
;  PRIOR APPLICATION NUMBER: 60/193,614
;  PRIOR FILING DATE: 2000-03-31
;  PRIOR APPLICATION NUMBER: PCT/US01/10661
;  PRIOR FILING DATE: 2001-04-02
;  NUMBER OF SEQ ID NOS: 12
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 8
;   LENGTH: 137
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-251-661-8

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  Best Local Similarity   100.0%;  Pred. No. 5.1e-34;
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Db         58 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 100


RESULT 21
US-09-919-497-74
; Sequence 74, Application US/09919497
; Patent No. US20020106662A1
; GENERAL INFORMATION:
;  APPLICANT: Mutter, George L.
;  TITLE OF INVENTION: PROGNOSTIC CLASSIFICATION OF ENDOMETRIAL CANCER
;  FILE REFERENCE: B0801/7225
;  CURRENT APPLICATION NUMBER: US/09/919,497
;  CURRENT FILING DATE:  2001-07-31
;  PRIOR APPLICATION NUMBER: US 60/221,735
;  PRIOR FILING DATE: 2000-07-31
;  NUMBER OF SEQ ID NOS: 100
;  SOFTWARE: PatentIn version 3.0
; SEQ ID NO 74
;   LENGTH: 153
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-919-497-74

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Db         74 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 116


RESULT 22
US-10-136-639-3
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; SEQ ID NO 7
;   LENGTH: 70
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-272-483A-7

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  Best Local Similarity   100.0%;  Pred. No. 3e-34;
  Matches   43;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
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Db         26 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 68


RESULT 14
US-10-444-262-1
; Sequence 1, Application US/10444262
; Publication No. US20040023883A1
; GENERAL INFORMATION:
;  APPLICANT: Dubaquie, Yves
;  APPLICANT:  Lowman, Henry
;  TITLE OF INVENTION: PROTEIN VARIANTS
;  FILE REFERENCE: P1712R1
;  CURRENT APPLICATION NUMBER: US/10/444,262
;  CURRENT FILING DATE:  2003-05-22
;  PRIOR APPLICATION NUMBER: US/09/724,478
;  PRIOR FILING DATE: 2000-11-28
;  PRIOR APPLICATION NUMBER: US/09/477,923
;  PRIOR FILING DATE: 2000-01-05
;  NUMBER OF SEQ ID NOS: 6
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;   LENGTH: 70
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-444-262-1

  Query Match             50.0%;  Score 43;  DB 16;  Length 70;
  Best Local Similarity   100.0%;  Pred. No. 3e-34;
  Matches   43;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

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              |||||||||||||||||||||||||||||||||||||||||||
Db         26 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 68


RESULT 15
US-10-323-046-42
; Sequence 42, Application US/10323046
; Publication No. US20030187232A1
; GENERAL INFORMATION:
;  APPLICANT: Hubbell, Jeffrey A
;  APPLICANT:  Schense, Jason C
;  APPLICANT:  Sakiyama-Elbert, Shelly E
;  TITLE OF INVENTION: Growth Factor Modified Protein Matrices for Tissue
;  TITLE OF INVENTION:  Engineering
;  FILE REFERENCE: ETH 107 CIP (2)
;  CURRENT APPLICATION NUMBER: US/10/323,046
;  CURRENT FILING DATE:  2002-12-17
;  PRIOR APPLICATION NUMBER: 09/141,153
;  PRIOR FILING DATE: 1998-08-27
;  NUMBER OF SEQ ID NOS: 43
;  SOFTWARE: PatentIn Ver. 3.1
; SEQ ID NO 42
;   LENGTH: 91
;   TYPE: PRT
;   ORGANISM: Artificial sequence
;   FEATURE:
;   OTHER INFORMATION: Modified IGF 1 from Homo sapiens
US-10-323-046-42

  Query Match             50.0%;  Score 43;  DB 14;  Length 91;
  Best Local Similarity   100.0%;  Pred. No. 3.7e-34;
  Matches   43;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
              |||||||||||||||||||||||||||||||||||||||||||
Db         47 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 89


RESULT 16
US-09-852-261-10
; Sequence 10, Application US/09852261
; Patent No. US20020083477A1
; GENERAL INFORMATION:
;  APPLICANT: GOLDSPINK, GEOFFREY
;  APPLICANT:  TERENGHI, GIORGIO
;  TITLE OF INVENTION: REPAIR OF NERVE DAMAGE
;  FILE REFERENCE: 117-351
;  CURRENT APPLICATION NUMBER: US/09/852,261
;  CURRENT FILING DATE:  2001-05-10
;  PRIOR APPLICATION NUMBER: GB 0011278.9
;  PRIOR FILING DATE: 2000-05-10
;  NUMBER OF SEQ ID NOS: 14
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 10
;   LENGTH: 105
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-852-261-10

  Query Match             50.0%;  Score 43;  DB 9;  Length 105;
  Best Local Similarity   100.0%;  Pred. No. 4.2e-34;
  Matches   43;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
              |||||||||||||||||||||||||||||||||||||||||||
Db         26 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 68


RESULT 17
US-10-238-114-3
; Sequence 3, Application US/10238114
; Publication No. US20030100073A1
; GENERAL INFORMATION:
;  APPLICANT: Merial
;  APPLICANT:  ANDREONI , Christine Michele
;  TITLE OF INVENTION: IGF-1 AS FELINE VACCINE ADJUVANT, IN PARTICULAR AGAINST FELINE RET
;  FILE REFERENCE: 454313-3165.1
;  CURRENT APPLICATION NUMBER: US/10/238,114
;  CURRENT FILING DATE:  2002-09-10
;  PRIOR APPLICATION NUMBER: FR 01 11736
;  PRIOR FILING DATE: 2001-09-11
;  PRIOR APPLICATION NUMBER: US 60/318,666
;  PRIOR FILING DATE: 2001-09-12
;  NUMBER OF SEQ ID NOS: 20
;  SOFTWARE: PatentIn version 3.1
; SEQ ID NO 3
;   LENGTH: 105
;   TYPE: PRT
;   ORGANISM: Felis catus
US-10-238-114-3

  Query Match             50.0%;  Score 43;  DB 14;  Length 105;
  Best Local Similarity   100.0%;  Pred. No. 4.2e-34;
  Matches   43;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
              |||||||||||||||||||||||||||||||||||||||||||
Db         26 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 68


RESULT 18
US-09-852-261-2
; Sequence 2, Application US/09852261
; Patent No. US20020083477A1
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; SEQ ID NO 1
; LENGTH: 70
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-136-639-1

Query Match 50.0%; Score 43; DB 14; Length 70;
Best Local Similarity 100.0%; Pred. No. 3e-34;
Matches 43; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
Db 26 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 68

RESULT 10
US-10-136-841-7
; Sequence 7, Application US/10136841
; Publication No. US20030082176A1
; GENERAL INFORMATION:
; APPLICANT: LeBowitz, Jonathan
; APPLICANT: Beverley, Stephen
; TITLE OF INVENTION: SUBCELLULAR TARGETING OF THERAPEUTIC PROTEINS
; FILE REFERENCE: SYM-007
; CURRENT APPLICATION NUMBER: US/10/136,841
; CURRENT FILING DATE: 2002-08-22
; PRIOR APPLICATION NUMBER: US 60/287,531
; PRIOR FILING DATE: 2001-04-30
; PRIOR APPLICATION NUMBER: US 60/304,609
; PRIOR FILING DATE: 2001-07-10
; PRIOR APPLICATION NUMBER: US 60/329,461
; PRIOR FILING DATE: 2001-10-15
; PRIOR APPLICATION NUMBER: US 60/351,276
; PRIOR FILING DATE: 2002-01-23
; NUMBER OF SEQ ID NOS: 22
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 7
; LENGTH: 70
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-136-841-7

Query Match 50.0%; Score 43; DB 14; Length 70;
Best Local Similarity 100.0%; Pred. No. 3e-34;
Matches 43; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
Db 26 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 68

RESULT 11
US-10-444-326-1
; Sequence 1, Application US/10444326
; Publication No. US20030191065A1
; GENERAL INFORMATION:
; APPLICANT: Dubaquie, Yves
; APPLICANT: Lowman, Henry
; TITLE OF INVENTION: PROTEIN VARIANTS
; FILE REFERENCE: P1712R1
; CURRENT APPLICATION NUMBER: US/10/444,326
; CURRENT FILING DATE: 2003-05-22
; PRIOR APPLICATION NUMBER: US/09/723,866
; PRIOR FILING DATE: 2000-11-28
; PRIOR APPLICATION NUMBER: US/09/477,923
; PRIOR FILING DATE: 2000-01-05
; NUMBER OF SEQ ID NOS: 6
; SEQ ID NO 1
; LENGTH: 70
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-444-326-1

Query Match 50.0%; Score 43; DB 14; Length 70;
Best Local Similarity 100.0%; Pred. No. 3e-34;
Matches 43; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
Db 26 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 68

RESULT 12
US-10-272-531A-7
; Sequence 7, Application US/10272531A
; Publication No. US20040005309A1
; GENERAL INFORMATION:
; APPLICANT: LeBowitz, Jonathan H
; APPLICANT: Beverley, Stephen
; APPLICANT: Sly, William S.
; TITLE OF INVENTION: TARGETED THERAPEUTIC PROTEINS
; FILE REFERENCE: SYM-009
; CURRENT APPLICATION NUMBER: US/10/272,531A
; CURRENT FILING DATE: 2002-10-16
; PRIOR APPLICATION NUMBER: US 60/384,452
; PRIOR FILING DATE: 2002-05-29
; PRIOR APPLICATION NUMBER: US 60/386,019
; PRIOR FILING DATE: 2002-06-05
; PRIOR APPLICATION NUMBER: US 60/408,816
; PRIOR FILING DATE: 2002-09-06
; NUMBER OF SEQ ID NOS: 22
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 7
; LENGTH: 70
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-272-531A-7

Query Match 50.0%; Score 43; DB 15; Length 70;
Best Local Similarity 100.0%; Pred. No. 3e-34;
Matches 43; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
Db 26 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 68

RESULT 13
US-10-272-483A-7
; Sequence 7, Application US/10272483A
; Publication No. US20040006008A1
; GENERAL INFORMATION:
; APPLICANT: LeBowitz, Jonathan H
; APPLICANT: Beverley, Stephen
; TITLE OF INVENTION: TARGETED THERAPEUTIC PROTEINS
; FILE REFERENCE: SYM-007CP
; CURRENT APPLICATION NUMBER: US/10/272,483A
; CURRENT FILING DATE: 2002-10-16
; PRIOR APPLICATION NUMBER: US 60/287,531
; PRIOR FILING DATE: 2001-04-30
; PRIOR APPLICATION NUMBER: US 10/136,841
; PRIOR FILING DATE: 2002-04-30
; PRIOR APPLICATION NUMBER: US 60/384,452
; PRIOR FILING DATE: 2002-05-29
; PRIOR APPLICATION NUMBER: US 60/386,019
; PRIOR FILING DATE: 2002-06-05
; PRIOR APPLICATION NUMBER: US 60/408,816
; PRIOR FILING DATE: 2002-09-06
; PRIOR APPLICATION NUMBER: US 60/304,609
; PRIOR FILING DATE: 2001-07-10
; PRIOR APPLICATION NUMBER: US 60/329,461
; PRIOR FILING DATE: 2001-10-15
; PRIOR APPLICATION NUMBER: US 60/351,276
; PRIOR FILING DATE: 2002-01-23
; NUMBER OF SEQ ID NOS: 22
; SOFTWARE: PatentIn version 3.1

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RESULT 5
US-09-903-327A-8
; Sequence 8, Application US/09903327A
; Patent No. US20020164333A1
; GENERAL INFORMATION:
;  APPLICANT: Nemerow, Glen R.
;  APPLICANT:  Li, Erguang
;  TITLE OF INVENTION: BIFUNCTIONAL MOLECULES AND VECTORS COMPLEXED THEREWITH FOR TARGET
;  TITLE OF INVENTION:  GENE
;  TITLE OF INVENTION:  DELIVERY
;  FILE REFERENCE: 22908-1228
;  CURRENT APPLICATION NUMBER: US/09/903,327A
;  CURRENT FILING DATE:  2001-07-10
;  PRIOR APPLICATION NUMBER: 09/613,017
;  PRIOR FILING DATE: 2000-07-10
;  NUMBER OF SEQ ID NOS: 33
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 8
;   LENGTH: 70
;   TYPE: PRT
;   ORGANISM: Human
;   FEATURE:
;   NAME/KEY: PEPTIDE
;   LOCATION: (0)...(0)
;   OTHER INFORMATION: Human Insulin-like Growth Factor 1 sequence
;   OTHER INFORMATION: (IGF-1, mature peptide)
US-09-903-327A-8

  Query Match             50.0%;  Score 43;  DB 9;  Length 70;
  Best Local Similarity   100.0%;  Pred. No. 3e-34;
  Matches   43;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
              |||||||||||||||||||||||||||||||||||||||||||
Db         26 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 68


RESULT 6
US-09-858-935B-3
; Sequence 3, Application US/09858935B
; Publication No. US20030069177A1
; GENERAL INFORMATION:
;  APPLICANT: Dubaquie, Yves
;  APPLICANT:  Filvaroff, Ellen
;  APPLICANT:  Lowman, Henry B.
;  TITLE OF INVENTION: METHOD FOR TREATING CARTILAGE DISORDERS
;  FILE REFERENCE: P1794R1
;  CURRENT APPLICATION NUMBER: US/09/858,935B
;  CURRENT FILING DATE:  2002-07-02
;  PRIOR APPLICATION NUMBER: US 60/248,985
;  PRIOR FILING DATE: 2000-11-15
;  PRIOR APPLICATION NUMBER: US 60/204,490
;  PRIOR FILING DATE: 2000-05-16
;  NUMBER OF SEQ ID NOS: 153
; SEQ ID NO 3
;   LENGTH: 70
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-858-935B-3

  Query Match             50.0%;  Score 43;  DB 10;  Length 70;
  Best Local Similarity   100.0%;  Pred. No. 3e-34;
  Matches   43;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
              |||||||||||||||||||||||||||||||||||||||||||
Db         26 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 68


RESULT 7
US-10-028-410-1
; Sequence 1, Application US/10028410
; Publication No. US20020160955A1
; GENERAL INFORMATION:
;  APPLICANT: Dubaquie, Yves
;  APPLICANT:  Lowman, Henry
;  TITLE OF INVENTION: PROTEIN VARIANTS
;  FILE REFERENCE: P1712R1-1
;  CURRENT APPLICATION NUMBER: US/10/028,410
;  CURRENT FILING DATE:  2001-12-19
;  PRIOR APPLICATION NUMBER: US/09/477,924
;  PRIOR FILING DATE: 2000-01-05
;  NUMBER OF SEQ ID NOS: 6
; SEQ ID NO 1
;   LENGTH: 70
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-028-410-1

  Query Match             50.0%;  Score 43;  DB 13;  Length 70;
  Best Local Similarity   100.0%;  Pred. No. 3e-34;
  Matches   43;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
              |||||||||||||||||||||||||||||||||||||||||||
Db         26 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 68


RESULT 8
US-10-066-009A-1
; Sequence 1, Application US/10066009A
; Publication No. US20020165155A1
; GENERAL INFORMATION:
;  APPLICANT: Schaffer, Michelle
;  APPLICANT:  Ultsch, Mark
;  APPLICANT:  Vajdos, Felix
;  TITLE OF INVENTION: CRYSTALLIZATION OF IGF-1
;  FILE REFERENCE: P1869R1
;  CURRENT APPLICATION NUMBER: US/10/066,009A
;  CURRENT FILING DATE:  2002-06-24
;  PRIOR APPLICATION NUMBER: US 60/287,072
;  PRIOR FILING DATE: 2001-04-27
;  PRIOR APPLICATION NUMBER: US 60/267,977
;  PRIOR FILING DATE: 2001-02-09
;  NUMBER OF SEQ ID NOS: 5
; SEQ ID NO 1
;   LENGTH: 70
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-066-009A-1

  Query Match             50.0%;  Score 43;  DB 13;  Length 70;
  Best Local Similarity   100.0%;  Pred. No. 3e-34;
  Matches   43;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
              |||||||||||||||||||||||||||||||||||||||||||
Db         26 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 68


RESULT 9
US-10-136-639-1
; Sequence 1, Application US/10136639
; Publication No. US20030072761A1
; GENERAL INFORMATION:
;  APPLICANT: LeBowitz, Jonathan
;  TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR TARGETING PROTEINS ACROSS THE BLOOD B
;  TITLE OF INVENTION:  BARRIER
;  FILE REFERENCE: SYM-008
;  CURRENT APPLICATION NUMBER: US/10/136,639
;  CURRENT FILING DATE:  2002-09-06
;  PRIOR APPLICATION NUMBER: US 60/329,650
;  PRIOR FILING DATE: 2001-10-16
;  NUMBER OF SEQ ID NOS: 4
;  SOFTWARE: PatentIn version 3.0
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89	7	8.1	429	16	US-10-389-566-1317	Sequence 1317, Ap
90	7	8.1	484	9	US-09-828-313-32	Sequence 32, Appl
91	7	8.1	1391	15	US-10-369-493-6932	Sequence 6932, Ap
92	6	7.0	9	15	US-10-215-272-39	Sequence 39, Appl
93	6	7.0	9	15	US-10-215-272-40	Sequence 40, Appl
94	6	7.0	9	15	US-10-107-532-1696	Sequence 1696, Ap
95	6	7.0	9	15	US-10-107-532-2791	Sequence 2791, Ap
96	6	7.0	9	15	US-10-107-532-4027	Sequence 4027, Ap
97	6	7.0	9	15	US-10-107-532-4041	Sequence 4041, Ap
98	6	7.0	9	15	US-10-107-532-4052	Sequence 4052, Ap
99	6	7.0	9	15	US-10-107-532-4152	Sequence 4152, Ap
100	6	7.0	9	15	US-10-107-532-4187	Sequence 4187, Ap

ALIGNMENTS

RESULT 1
US-09-852-261-6
; Sequence 6, Application US/09852261
; Patent No. US20020083477A1
; GENERAL INFORMATION:
; APPLICANT: GOLDSPINK, GEOFFREY
; APPLICANT: TERENGHI, GIORGIO
; TITLE OF INVENTION: REPAIR OF NERVE DAMAGE
; FILE REFERENCE: 117-351
; CURRENT APPLICATION NUMBER: US/09/852,261
; CURRENT FILING DATE: 2001-05-10
; PRIOR APPLICATION NUMBER: GB 0011278.9
; PRIOR FILING DATE: 2000-05-10
; NUMBER OF SEQ ID NOS: 14
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 6
; LENGTH: 111
; TYPE: PRT
; ORGANISM: Oryctolagus cuniculus
US-09-852-261-6

Query Match 100.0%; Score 86; DB 9; Length 111;
Best Local Similarity 100.0%; Pred. No. 8.6e-76;
Matches 86; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Db         26 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAKAARSVRAQRHTDMPKTQ 85

Qy         61 KYQPPSTNKKMKSQRRRKGSTFEEHK 86
              ||||||||||||||||||||||||||
Db         86 KYQPPSTNKKMKSQRRRKGSTFEEHK 111
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RESULT 2
US-09-852-261-14
; Sequence 14, Application US/09852261
; Patent No. US20020083477A1
; GENERAL INFORMATION:
; APPLICANT: GOLDSPINK, GEOFFREY
; APPLICANT: TERENGHI, GIORGIO
; TITLE OF INVENTION: REPAIR OF NERVE DAMAGE
; FILE REFERENCE: 117-351
; CURRENT APPLICATION NUMBER: US/09/852,261
; CURRENT FILING DATE: 2001-05-10
; PRIOR APPLICATION NUMBER: GB 0011278.9
; PRIOR FILING DATE: 2000-05-10
; NUMBER OF SEQ ID NOS: 14
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 14
; LENGTH: 105
; TYPE: PRT
; ORGANISM: Oryctolagus cuniculus
US-09-852-261-14

Query Match 70.9%; Score 61; DB 9; Length 105;
Best Local Similarity 100.0%; Pred. No. 1.4e-51;
Matches 61; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAKAARSVRAQRHTDMPKTQ 60
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Db         26 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAKAARSVRAQRHTDMPKTQ 85

Qy         61 K 61
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Db         86 K 86
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RESULT 3
US-09-848-664-29
; Sequence 29, Application US/09848664
; Patent No. US20020146414A1
; GENERAL INFORMATION:
; APPLICANT: Sakiyama-Elbert, Shelly E.
; APPLICANT: Hubbell, Jeffrey A.
; TITLE OF INVENTION: Controlled Release of No. US20020146414A1-Heparin Binding Growt
; TITLE OF INVENTION: Factors from Heparin Containing Matrices
; FILE REFERENCE: ETH 108
; CURRENT APPLICATION NUMBER: US/09/848,664
; CURRENT FILING DATE: 2001-05-03
; PRIOR APPLICATION NUMBER: 09/298,084
; PRIOR FILING DATE: 1999-04-22
; NUMBER OF SEQ ID NOS: 31
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 29
; LENGTH: 70
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-848-664-29

Query Match 50.0%; Score 43; DB 9; Length 70;
Best Local Similarity 100.0%; Pred. No. 3e-34;
Matches 43; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
              |||||||||||||||||||||||||||||||||||||||||||
Db         26 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 68
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RESULT 4
US-09-848-664-30
; Sequence 30, Application US/09848664
; Patent No. US20020146414A1
; GENERAL INFORMATION:
; APPLICANT: Sakiyama-Elbert, Shelly E.
; APPLICANT: Hubbell, Jeffrey A.
; TITLE OF INVENTION: Controlled Release of No. US20020146414A1-Heparin Binding Growt
; TITLE OF INVENTION: Factors from Heparin Containing Matrices
; FILE REFERENCE: ETH 108
; CURRENT APPLICATION NUMBER: US/09/848,664
; CURRENT FILING DATE: 2001-05-03
; PRIOR APPLICATION NUMBER: 09/298,084
; PRIOR FILING DATE: 1999-04-22
; NUMBER OF SEQ ID NOS: 31
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 30
; LENGTH: 70
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-848-664-30

Query Match 50.0%; Score 43; DB 9; Length 70;
Best Local Similarity 100.0%; Pred. No. 3e-34;
Matches 43; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
              |||||||||||||||||||||||||||||||||||||||||||
Db         26 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 68
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GenCore version 5.1.6

OM protein - protein search, using sw model

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Title: US-09-852-261-6_COPY_26_111
Perfect score: 86
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8: /cgn2_6/ptodata/1/pubpaa/US08_PUBCOMB.pep:*
9: /cgn2_6/ptodata/1/pubpaa/US09A_PUBCOMB.pep:*
10: /cgn2_6/ptodata/1/pubpaa/US09B_PUBCOMB.pep:*
11: /cgn2_6/ptodata/1/pubpaa/US09C_PUBCOMB.pep:*
12: /cgn2_6/ptodata/1/pubpaa/US09_NEW_PUB.pep:*
13: /cgn2_6/ptodata/1/pubpaa/US10A_PUBCOMB.pep:*
14: /cgn2_6/ptodata/1/pubpaa/US10B_PUBCOMB.pep:*
15: /cgn2_6/ptodata/1/pubpaa/US10C_PUBCOMB.pep:*
16: /cgn2_6/ptodata/1/pubpaa/US10_NEW_PUB.pep:*
17: /cgn2_6/ptodata/1/pubpaa/US60_NEW_PUB.pep:*
18: /cgn2_6/ptodata/1/pubpaa/US60_PUBCOMB.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	86	100.0	111	9	US-09-852-261-6	Sequence 6, Appli
2	61	70.9	105	9	US-09-852-261-14	Sequence 14, Appl
3	43	50.0	70	9	US-09-848-664-29	Sequence 29, Appl
4	43	50.0	70	9	US-09-848-664-30	Sequence 30, Appl
5	43	50.0	70	9	US-09-903-327A-8	Sequence 8, Appli
6	43	50.0	70	10	US-09-858-935B-3	Sequence 3, Appli
7	43	50.0	70	13	US-10-028-410-1	Sequence 1, Appli
8	43	50.0	70	13	US-10-066-009A-1	Sequence 1, Appli
9	43	50.0	70	14	US-10-136-639-1	Sequence 1, Appli
10	43	50.0	70	14	US-10-136-841-7	Sequence 7, Appli
11	43	50.0	70	14	US-10-444-326-1	Sequence 1, Appli
12	43	50.0	70	15	US-10-272-531A-7	Sequence 7, Appli
13	43	50.0	70	15	US-10-272-483A-7	Sequence 7, Appli
14	43	50.0	70	16	US-10-444-262-1	Sequence 1, Appli
15	43	50.0	91	14	US-10-323-046-42	Sequence 42, Appl
16	43	50.0	105	9	US-09-852-261-10	Sequence 10, Appl
17	43	50.0	105	14	US-10-238-114-3	Sequence 3, Appli
18	43	50.0	110	9	US-09-852-261-2	Sequence 2, Appli
19	43	50.0	118	14	US-10-179-046-14	Sequence 14, Appl
20	43	50.0	137	14	US-10-251-661-8	Sequence 8, Appli
21	43	50.0	153	9	US-09-919-497-74	Sequence 74, Appl
22	43	50.0	153	14	US-10-136-639-3	Sequence 3, Appli
23	43	50.0	153	14	US-10-238-114-2	Sequence 2, Appli
24	43	50.0	153	14	US-10-207-655-55	Sequence 55, Appl
25	43	50.0	155	9	US-09-921-398-39	Sequence 39, Appl
26	43	50.0	155	14	US-10-280-826-39	Sequence 39, Appl
27	43	50.0	191	9	US-09-921-398-41	Sequence 41, Appl
28	43	50.0	191	14	US-10-280-826-41	Sequence 41, Appl
29	43	50.0	195	15	US-10-443-466A-20	Sequence 20, Appl
30	43	50.0	510	9	US-09-903-327A-12	Sequence 12, Appl
31	43	50.0	953	14	US-10-241-596-14	Sequence 14, Appl
32	31	36.0	133	14	US-10-161-088-2	Sequence 2, Appli
33	29	33.7	68	14	US-10-339-740-218	Sequence 218, App
34	26	30.2	105	9	US-09-852-261-12	Sequence 12, Appl
35	26	30.2	111	9	US-09-852-261-4	Sequence 4, Appli
36	24	27.9	46	9	US-09-205-658-138	Sequence 138, App
37	24	27.9	46	9	US-09-205-658-139	Sequence 139, App
38	24	27.9	46	10	US-09-963-693-138	Sequence 138, App
39	24	27.9	46	10	US-09-963-693-139	Sequence 139, App
40	24	27.9	56	13	US-10-066-009A-5	Sequence 5, Appli
41	21	24.4	29	14	US-10-279-061-86	Sequence 86, Appl
42	21	24.4	103	14	US-10-279-061-72	Sequence 72, Appl
43	21	24.4	103	14	US-10-279-061-82	Sequence 82, Appl
44	21	24.4	131	14	US-10-279-061-88	Sequence 88, Appl
45	15	17.4	18	15	US-10-016-569A-16	Sequence 16, Appl
46	15	17.4	18	15	US-10-308-644-16	Sequence 16, Appl
47	12	14.0	12	15	US-10-016-569A-15	Sequence 15, Appl
48	12	14.0	12	15	US-10-308-644-15	Sequence 15, Appl
49	9	10.5	46	9	US-09-205-658-140	Sequence 140, App
50	9	10.5	46	9	US-09-205-658-141	Sequence 141, App
51	9	10.5	46	10	US-09-963-693-140	Sequence 140, App
52	9	10.5	46	10	US-09-963-693-141	Sequence 141, App
53	9	10.5	67	13	US-10-066-009A-2	Sequence 2, Appli
54	9	10.5	67	14	US-10-136-639-2	Sequence 2, Appli
55	9	10.5	67	14	US-10-136-841-8	Sequence 8, Appli
56	9	10.5	67	15	US-10-272-531A-8	Sequence 8, Appli
57	9	10.5	67	15	US-10-272-483A-8	Sequence 8, Appli
58	9	10.5	70	14	US-10-136-841-4	Sequence 4, Appli
59	9	10.5	70	15	US-10-272-531A-4	Sequence 4, Appli
60	9	10.5	70	15	US-10-272-483A-4	Sequence 4, Appli
61	9	10.5	156	9	US-09-972-809-7	Sequence 7, Appli
62	9	10.5	180	14	US-10-081-119-38	Sequence 38, Appl
63	9	10.5	180	14	US-10-136-841-2	Sequence 2, Appli
64	9	10.5	180	14	US-10-097-340-145	Sequence 145, App
65	9	10.5	180	14	US-10-207-655-57	Sequence 57, Appl
66	9	10.5	180	15	US-10-295-027-199	Sequence 199, App
67	9	10.5	180	15	US-10-272-531A-2	Sequence 2, Appli
68	9	10.5	180	15	US-10-173-999-99	Sequence 99, Appl
69	9	10.5	180	15	US-10-258-666-2	Sequence 2, Appli
70	9	10.5	180	15	US-10-272-483A-2	Sequence 2, Appli
71	9	10.5	180	15	US-10-443-466A-21	Sequence 21, Appl
72	9	10.5	722	14	US-10-136-841-6	Sequence 6, Appli
73	9	10.5	722	15	US-10-272-531A-6	Sequence 6, Appli
74	9	10.5	722	15	US-10-272-483A-6	Sequence 6, Appli
75	8	9.3	239	14	US-10-029-386-33125	Sequence 33125, A
76	8	9.3	769	16	US-10-389-566-2317	Sequence 2317, Ap
77	8	9.3	772	16	US-10-389-566-1451	Sequence 1451, Ap
78	8	9.3	772	16	US-10-389-566-1512	Sequence 1512, Ap
79	7	8.1	13	9	US-09-746-170-3	Sequence 3, Appli
80	7	8.1	13	9	US-09-746-170-12	Sequence 12, Appl
81	7	8.1	13	9	US-09-746-170-22	Sequence 22, Appl
82	7	8.1	13	9	US-09-746-170-37	Sequence 37, Appl
83	7	8.1	20	14	US-10-339-740-226	Sequence 226, App
84	7	8.1	46	9	US-09-205-658-144	Sequence 144, App
85	7	8.1	46	9	US-09-205-658-145	Sequence 145, App
86	7	8.1	46	10	US-09-963-693-144	Sequence 144, App
87	7	8.1	46	10	US-09-963-693-145	Sequence 145, App
88	7	8.1	399	15	US-10-094-749-1978	Sequence 1978, Ap

A;Molecule type: DNA
A;Residues: 82-85,'A',87-125 <SH2>
C;Genetics:
A;Gene: IGF-I''
C;Superfamily: insulin
C;Keywords: growth factor

Query Match 16.3%; Score 14; DB 2; Length 153;
Best Local Similarity 100.0%; Pred. No. 6.9e-07;
Matches 14; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 45 ARSVRAQRHTDMPK 58
||||||||||||||
Db 118 ARSVRAQRHTDMPK 131

RESULT 25
A41399
insulin-like growth factor IA precursor - chicken
C;Species: Gallus gallus (chicken)
C;Date: 03-Apr-1992 #sequence_revision 03-Apr-1992 #text_change 16-Jul-1999
C;Accession: A41399; A61092; A40012; B60853; A37415
R;Kajimoto, Y.; Rotwein, P.
Mol. Endocrinol. 3, 1907-1913, 1989
A;Title: Structure and expression of a chicken insulin-like growth factor I precursor.
A;Reference number: A41399; MUID:90190648; PMID:2628728
A;Accession: A41399
A;Molecule type: mRNA
A;Residues: 1-153 <KAJ>
A;Cross-references: GB:M32791; NID:g211950; PIDN:AAA48828.1; PID:g211951
R;Fawcett, D.H.; Bulfield, G.
J. Mol. Endocrinol. 4, 201-211, 1990
A;Title: Molecular cloning, sequence analysis and expression of putative chicken insulin
A;Reference number: A61092; MUID:90334699; PMID:2378674
A;Accession: A61092
A;Status: not compared with conceptual translation
A;Molecule type: mRNA
A;Residues: 1-153 <FAW>
R;Kajimoto, Y.; Rotwein, P.
J. Biol. Chem. 266, 9724-9731, 1991
A;Title: Structure of the chicken insulin-like growth factor I gene reveals conserved pr
A;Reference number: A40012; MUID:91236750; PMID:2033062
A;Accession: A40012
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-21 <KA2>
A;Cross-references: GB:M74176; NID:g211952; PIDN:AAA48829.1; PID:g211953
R;Dawe, S.R.; Francis, G.L.; McNamara, P.J.; Wallace, J.C.; Ballard, F.J.
J. Endocrinol. 117, 173-181, 1988
A;Title: Purification, partial sequences and properties of chicken insulin-like growth f
A;Reference number: A60853; MUID:88244560; PMID:3379351
A;Accession: B60853
A;Molecule type: protein
A;Residues: 49-79 <DAW>
R;Ballard, F.J.; Johnson, R.J.; Owens, P.C.; Francis, G.L.; Upton, F.M.; McMurtry, J.P.;
Gen. Comp. Endocrinol. 79, 459-468, 1990
A;Title: Chicken insulin-like growth factor-I: amino acid sequence, radioimmunoassay, an
A;Reference number: A37415; MUID:91106695; PMID:2272467
A;Accession: A37415
A;Status: preliminary
A;Molecule type: protein
A;Residues: 49-118 <BAL>
C;Superfamily: insulin
C;Keywords: growth factor
F;49-77,90-110/Product: insulin-like growth factor IA #status experimental <MAT>
F;49-77/Domain: insulin-like growth factor IA B chain #status predicted <CHB>
F;78-89/Domain: insulin connecting C peptide-like #status experimental <CPE>
F;90-110/Domain: insulin-like growth factor IA A chain #status experimental <CHA>
F;111-118/Domain: D peptide #status experimental <MAA>
F;119-153/Domain: carboxyl-terminal propeptide (E peptide) #status predicted <CTP>

Query Match 16.3%; Score 14; DB 2; Length 153;
Best Local Similarity 100.0%; Pred. No. 6.9e-07;
Matches 14; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 45 ARSVRAQRHTDMPK 58
||||||||||||||
Db 118 ARSVRAQRHTDMPK 131

Search completed: March 3, 2004, 12:11:08
Job time : 22 secs

Mol. Endocrinol. 3, 2005-2010, 1989
A;Title: Nucleotide sequence and growth hormone-regulated expression of salmon insulin-l
A;Reference number: A41396; MUID:90190659; PMID:2628735
A;Accession: A41396
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-176 <CAO>
A;Cross-references: GB:M32792; NID:g213431; PIDN:AAA49410.1; PID:g213432
R;Koval, A.; Kulik, V.; Duguay, S.; Plisetskaya, E.; Adamo, M.L.; Roberts, C.T.
DNA Cell Biol. 13, 1057-1062, 1994
A;Title: Characterization of a salmon insulin-like growth factor I promoter.
A;Reference number: I51255; MUID:95032736; PMID:7945938
A;Accession: I51255
A;Status: translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Residues: 1-5,'F',7-16 <KOV>
A;Cross-references: GB:S74130; NID:g707007; PIDN:AAD14148.1; PID:g4261848
R;Duguay, S.J.; Park, L.K.; Samadpour, M.; Dickhoff, W.W.
Mol. Endocrinol. 6, 1202-1210, 1992
A;Title: Nucleotide sequence and tissue distribution of three insulin-like growth factor
A;Reference number: A44012; MUID:93024477; PMID:1406698
A;Accession: A44012
A;Status: preliminary; not compared with conceptual translation
A;Molecule type: mRNA
A;Residues: 27-130,158-169 <DUG>
A;Cross-references: GB:M81911; NID:g213438; PIDN:AAB59947.1; PID:g213439
A;Note: sequence extracted from NCBI backbone (NCBIP:115183)
A;Accession: B44012
A;Status: preliminary; not compared with conceptual translation
A;Molecule type: mRNA
A;Residues: 27-169 <DU2>
A;Cross-references: GB:M81912; NID:g213440; PIDN:AAB59948.1; PID:g213441
A;Note: sequence extracted from NCBI backbone (NCBIP:115182)
C;Genetics:
A;Gene: IGF-I
C;Superfamily: insulin
C;Keywords: growth factor

  Query Match 17.4%; Score 15; DB 2; Length 176;
  Best Local Similarity 100.0%; Pred. No. 7.2e-08;
  Matches 15; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 43 KAARSVRAQRHTDMP 57
Db 112 KAARSVRAQRHTDMP 126

RESULT 21
A46244
insulin-like growth factor I precursor - rainbow trout
C;Species: Oncorhynchus mykiss (rainbow trout)
C;Date: 21-Sep-1993 #sequence_revision 18-Nov-1994 #text_change 16-Jul-1999
C;Accession: A46244
R;Shamblott, M.J.; Chen, T.T.
Proc. Natl. Acad. Sci. U.S.A. 89, 8913-8917, 1992
A;Title: Identification of a second insulin-like growth factor in a fish species.
A;Reference number: A46244; MUID:93028377; PMID:1409585
A;Accession: A46244
A;Status: preliminary
A;Molecule type: nucleic acid
A;Residues: 1-176 <SHA>
A;Cross-references: GB:M95183; NID:g213435; PIDN:AAA49412.1; PID:g213436
A;Experimental source: liver
A;Note: sequence extracted from NCBI backbone (NCBIN:115350, NCBIP:115352)
C;Superfamily: insulin

  Query Match 17.4%; Score 15; DB 2; Length 176;
  Best Local Similarity 100.0%; Pred. No. 7.2e-08;
  Matches 15; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 43 KAARSVRAQRHTDMP 57
Db 112 KAARSVRAQRHTDMP 126

RESULT 22
A54270
insulin-like growth factor-I precursor (clone OtIGFI-117A) - chinook salmon
C;Species: Oncorhynchus tschawytscha (chinook salmon)
C;Date: 13-Sep-1994 #sequence_revision 25-Apr-1997 #text_change 30-May-1997
C;Accession: A54270
R;Wallis, A.E.; Devlin, R.H.
Mol. Endocrinol. 7, 409-422, 1993
A;Title: Duplicate insulin-like growth factor-I genes in salmon display alternative sp
A;Reference number: A54270; MUID:93247592; PMID:7683374
A;Accession: A54270
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-188 <WAL>
A;Note: sequence extracted from NCBI backbone (NCBIN:130887, NCBIP:130891)
C;Superfamily: insulin

  Query Match 17.4%; Score 15; DB 2; Length 188;
  Best Local Similarity 100.0%; Pred. No. 7.6e-08;
  Matches 15; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 43 KAARSVRAQRHTDMP 57
Db 112 KAARSVRAQRHTDMP 126

RESULT 23
B54270
insulin-like growth factor-I precursor (clone OtIGFI-117B) - chinook salmon
C;Species: Oncorhynchus tschawytscha (chinook salmon)
C;Date: 13-Sep-1994 #sequence_revision 25-Apr-1997 #text_change 30-May-1997
C;Accession: B54270
R;Wallis, A.E.; Devlin, R.H.
Mol. Endocrinol. 7, 409-422, 1993
A;Title: Duplicate insulin-like growth factor-I genes in salmon display alternative sp
A;Reference number: A54270; MUID:93247592; PMID:7683374
A;Accession: B54270
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-188 <WAL>
A;Note: sequence extracted from NCBI backbone (NCBIN:130888, NCBIP:130892)
C;Superfamily: insulin

  Query Match 17.4%; Score 15; DB 2; Length 188;
  Best Local Similarity 100.0%; Pred. No. 7.6e-08;
  Matches 15; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 43 KAARSVRAQRHTDMP 57
Db 112 KAARSVRAQRHTDMP 126

RESULT 24
A36079
insulin-like growth factor I'' precursor - African clawed frog
C;Species: Xenopus laevis (African clawed frog)
C;Date: 30-Nov-1990 #sequence_revision 30-Nov-1990 #text_change 16-Jul-1999
C;Accession: A36079; B34049
R;Kajimoto, Y.; Rotwein, P.
Mol. Endocrinol. 4, 217-226, 1990
A;Title: Evolution of insulin-like growth factor I (IGF-I): structure and expression o
A;Reference number: A36079; MUID:90231335; PMID:2330002
A;Accession: A36079
A;Molecule type: mRNA
A;Residues: 1-153 <KAJ>
A;Cross-references: GB:M29857; NID:g214287; PIDN:AAA70330.1; PID:g214288
R;Shuldiner, A.R.; Nirula, A.; Scott, L.A.; Roth, J.
Biochem. Biophys. Res. Commun. 166, 223-230, 1990
A;Title: Evidence that Xenopus laevis contains two different nonallelic insulin-like g
A;Reference number: A90158; MUID:90147704; PMID:2302204
A;Accession: B34049

B40912
insulin-like growth factor I precursor form 2 - rat
C;Species: Rattus norvegicus (Norway rat)
C;Date: 28-Feb-1992 #sequence_revision 28-Feb-1992 #text_change 16-Jul-1999
C;Accession: B40912
R;Roberts Jr., C.T.; Lasky, S.R.; Lowe Jr., W.L.; Seaman, W.T.; LeRoith, D.
Mol. Endocrinol. 1, 243-248, 1987
A;Title: Molecular cloning of rat insulin-like growth factor I complementary deoxyribonu
c tissues.
A;Reference number: A40912; MUID:88288198; PMID:3453891
A;Accession: B40912
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-127 <ROB>
A;Cross-references: GB:M15481; NID:g204753; PIDN:AAA41387.1; PID:g204754
C;Superfamily: insulin

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  Best Local Similarity 100.0%; Pred. No. 2.7e-19;
  Matches 26; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 11 RRAPQTGIVDECCFRSCDLRRLEMYC 36
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Db 58 RRAPQTGIVDECCFRSCDLRRLEMYC 83

RESULT 16
A40912
insulin-like growth factor I precursor form 1 - rat
C;Species: Rattus norvegicus (Norway rat)
C;Date: 28-Feb-1992 #sequence_revision 28-Feb-1992 #text_change 16-Jul-1999
C;Accession: A40912
R;Roberts Jr., C.T.; Lasky, S.R.; Lowe Jr., W.L.; Seaman, W.T.; LeRoith, D.
Mol. Endocrinol. 1, 243-248, 1987
A;Title: Molecular cloning of rat insulin-like growth factor I complementary deoxyribonu
c tissues.
A;Reference number: A40912; MUID:88288198; PMID:3453891
A;Accession: A40912
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-133 <ROB>
A;Cross-references: GB:M15480; NID:g204749; PIDN:AAA41385.1; PID:g204750
C;Superfamily: insulin

  Query Match 30.2%; Score 26; DB 2; Length 133;
  Best Local Similarity 100.0%; Pred. No. 2.8e-19;
  Matches 26; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 11 RRAPQTGIVDECCFRSCDLRRLEMYC 36
||||||||||||||||||||||||||
Db 58 RRAPQTGIVDECCFRSCDLRRLEMYC 83

RESULT 17
D54270
insulin-like growth factor-I precursor (clone OtIGFI-0) - chinook salmon
C;Species: Oncorhynchus tschawytscha (chinook salmon)
C;Date: 13-Sep-1994 #sequence_revision 25-Apr-1997 #text_change 16-Jul-1999
C;Accession: D54270
R;Wallis, A.E.; Devlin, R.H.
Mol. Endocrinol. 7, 409-422, 1993
A;Title: Duplicate insulin-like growth factor-I genes in salmon display alternative spli
A;Reference number: A54270; MUID:93247592; PMID:7683374
A;Accession: D54270
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-149 <WAL>
A;Cross-references: GB:U15962; GB:S59515; NID:g559010; PIDN:AAA67268.1; PID:g559011
A;Note: sequence extracted from NCBI backbone (NCBIN:130890, NCBIP:130894)
C;Superfamily: insulin

  Query Match 17.4%; Score 15; DB 2; Length 149;
  Best Local Similarity 100.0%; Pred. No. 6.3e-08;
  Matches 15; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 43 KAARSVRAQRHTDMP 57
|||||||||||||||
Db 112 KAARSVRAQRHTDMP 126

RESULT 18
C44012
insulin-like growth factor I precursor, splice form 3 - coho salmon (fragment)
N;Contains: insulin-like growth factor I, splice form 1; insulin-like growth factor I, sp
C;Species: Oncorhynchus kisutch (coho salmon)
C;Date: 27-Apr-1993 #sequence_revision 27-Apr-1993 #text_change 16-Jul-1999
C;Accession: C44012; A44012; B44012
R;Duguay, S.J.; Park, L.K.; Samadpour, M.; Dickhoff, W.W.
Mol. Endocrinol. 6, 1202-1210, 1992
A;Title: Nucleotide sequence and tissue distribution of three insulin-like growth factor
A;Reference number: A44012; MUID:93024477; PMID:1406698
A;Accession: C44012
A;Status: preliminary; not compared with conceptual translation
A;Molecule type: mRNA
A;Residues: 1-155 <DUG>
A;Cross-references: GB:M81913; NID:g213442; PIDN:AAA49413.1; PID:g213443
A;Note: sequence extracted from NCBI backbone (NCBIP:115177)
C;Genetics:
A;Gene: IGF-I
C;Superfamily: insulin
C;Keywords: growth factor

  Query Match 17.4%; Score 15; DB 2; Length 155;
  Best Local Similarity 100.0%; Pred. No. 6.5e-08;
  Matches 15; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 43 KAARSVRAQRHTDMP 57
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Db 86 KAARSVRAQRHTDMP 100

RESULT 19
C54270
insulin-like growth factor-I precursor (clone OtIGFI-36) - chinook salmon
C;Species: Oncorhynchus tschawytscha (chinook salmon)
C;Date: 13-Sep-1994 #sequence_revision 25-Apr-1997 #text_change 16-Jul-1999
C;Accession: C54270
R;Wallis, A.E.; Devlin, R.H.
Mol. Endocrinol. 7, 409-422, 1993
A;Title: Duplicate insulin-like growth factor-I genes in salmon display alternative splic
A;Reference number: A54270; MUID:93247592; PMID:7683374
A;Accession: C54270
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-161 <WAL>
A;Cross-references: GB:U15961; GB:S59514; NID:g559008; PIDN:AAA67267.1; PID:g559009
A;Note: sequence extracted from NCBI backbone (NCBIN:130889, NCBIP:130893)
C;Superfamily: insulin

  Query Match 17.4%; Score 15; DB 2; Length 161;
  Best Local Similarity 100.0%; Pred. No. 6.7e-08;
  Matches 15; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 43 KAARSVRAQRHTDMP 57
|||||||||||||||
Db 112 KAARSVRAQRHTDMP 126

RESULT 20
A41396
insulin-like growth factor I precursor, splice form 2 - coho salmon
N;Contains: insulin-like growth factor I, splice form 1
C;Species: Oncorhynchus kisutch (coho salmon)
C;Date: 03-Apr-1992 #sequence_revision 03-Apr-1992 #text_change 21-Jul-2000
C;Accession: A41396; I51255; A44012; B44012
R;Cao, Q.P.; Duguay, S.J.; Plisetskaya, E.; Steiner, D.F.; Chan, S.J.

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  Matches   31;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          11 RRAPQTGIVDECCFRSCDLRRLEMYCAPLKP 41
               |||||||||||||||||||||||||||||||
Db          58 RRAPQTGIVDECCFRSCDLRRLEMYCAPLKP 88


RESULT 12
B27804
insulin-like growth factor IA precursor - rat
N;Alternate names: IGF-IA; somatomedin C
C;Species: Rattus norvegicus (Norway rat)
C;Date: 16-Mar-1989 #sequence_revision 16-Mar-1989 #text_change 21-Jul-2000
C;Accession: B27804; A27849; JH0133; A28504; JN0088; A32857; A61096
R;Shimatsu, A.; Rotwein, P.
J. Biol. Chem. 262, 7894-7900, 1987
A;Title: Mosaic evolution of the insulin-like growth factors. Organization, sequence, an
A;Reference number: A27804; MUID:87222423; PMID:3034909
A;Accession: B27804
A;Molecule type: DNA
A;Residues: 1-153 <SHI>
A;Cross-references: GB:M15651; GB:J02743; NID:g204297; PIDN:AAA41215.1; PID:g204300
R;Casella, S.J.; Smith, E.P.; Van Wyk, J.J.; Joseph, D.R.; Hynes, M.A.; Hoyt, E.C.; Lund
DNA 6, 325-330, 1987
A;Title: Isolation of rat testis cDNAs encoding an insulin-like growth factor I precurso
A;Reference number: A27849; MUID:88003970; PMID:3652906
A;Accession: A27849
A;Molecule type: mRNA
A;Residues: 27-153 <CAS>
A;Cross-references: GB:M17335; NID:g204751; PIDN:AAA41386.1; PID:g204752
R;Kato, H.; Okoshi, A.; Miura, Y.; Noguchi, T.
Agric. Biol. Chem. 54, 1599-1601, 1990
A;Title: A new cDNA clone relating to larger molecular species of rat insulin-like growt
A;Reference number: JH0133; MUID:91103966; PMID:1368571
A;Accession: JH0133
A;Molecule type: mRNA
A;Residues: 27-153 <KAT>
A;Cross-references: GB:D00698; NID:g220780; PIDN:BAA00604.1; PID:g220781
A;Experimental source: liver
R;Murphy, L.J.; Bell, G.I.; Duckworth, M.L.; Friesen, H.G.
Endocrinology 121, 684-691, 1987
A;Title: Identification, characterization, and regulation of a rat complementary deoxyri
A;Reference number: A28504; MUID:87246437; PMID:3595538
A;Accession: A28504
A;Molecule type: mRNA
A;Residues: 46-153 <MUR>
A;Cross-references: GB:M17714; NID:g204324; PIDN:AAA41227.1; PID:g204325
R;Kato, H.; Takenaka, A.; Miura, Y.; Nishiyama, M.; Noguchi, T.
Agric. Biol. Chem. 54, 2225-2230, 1990
A;Title: Evidence of introduction by molecular cloning of artificial inverted sequence a
A;Reference number: JN0088; MUID:91136779; PMID:1368576
A;Accession: JN0088
A;Molecule type: mRNA
A;Residues: 'MSAPP',22-153 <KA2>
A;Experimental source: liver
A;Note: the authors present evidence that this mRNA may contain an artifactual inversion
R;Tamura, K.; Kobayashi, M.; Ishii, Y.; Tamura, T.; Hashimoto, K.; Nakamura, S.; Niwa, M
J. Biol. Chem. 264, 5616-5621, 1989
A;Title: Primary structure of rat insulin-like growth factor-I and its biological activi
A;Reference number: A32857; MUID:89174609; PMID:2538424
A;Accession: A32857
A;Molecule type: protein
A;Residues: 49-118 <TAM>
R;Canalis, E.; McCarthy, T.; Centrella, M.
Endocrinology 122, 22-27, 1988
A;Title: Isolation and characterization of insulin-like growth factor I (somatomedin-C)
A;Reference number: A61096; MUID:88082445; PMID:3335205
A;Accession: A61096
A;Molecule type: protein
A;Residues: 49-53,'X',55-65 <CAN>
C;Superfamily: insulin
C;Keywords: alternative splicing; growth factor
F;49-118/Product: insulin-like growth factor I #status experimental <ILG>

  Query Match           36.0%;  Score 31;  DB 2;  Length 153;
  Best Local Similarity  100.0%;  Pred. No. 2.3e-24;
  Matches   31;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          11 RRAPQTGIVDECCFRSCDLRRLEMYCAPLKP 41
               |||||||||||||||||||||||||||||||
Db          84 RRAPQTGIVDECCFRSCDLRRLEMYCAPLKP 114


RESULT 13
A26859
insulin-like growth factor IB precursor - rat
C;Species: Rattus norvegicus (Norway rat)
C;Date: 19-Nov-1988 #sequence_revision 19-Nov-1988 #text_change 16-Jul-1999
C;Accession: A26859
R;Shimatsu, A.; Rotwein, P.
Nucleic Acids Res. 15, 7196, 1987
A;Title: Sequence of two rat insulin-like growth factor I mRNAs differing within the 5
A;Reference number: A26859; MUID:88015572; PMID:3658684
A;Accession: A26859
A;Molecule type: mRNA
A;Residues: 1-159 <SHI>
A;Cross-references: GB:X06107; GB:M32260; GB:Y00429; NID:g56424; PIDN:CAA29480.1; PID:
C;Superfamily: insulin
C;Keywords: alternative splicing; growth factor

  Query Match           36.0%;  Score 31;  DB 2;  Length 159;
  Best Local Similarity  100.0%;  Pred. No. 2.3e-24;
  Matches   31;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          11 RRAPQTGIVDECCFRSCDLRRLEMYCAPLKP 41
               |||||||||||||||||||||||||||||||
Db          84 RRAPQTGIVDECCFRSCDLRRLEMYCAPLKP 114


RESULT 14
A27804
insulin-like growth factor I precursor - rat
C;Species: Rattus norvegicus (Norway rat)
C;Date: 09-Jun-1988 #sequence_revision 09-Jun-1988 #text_change 16-Jul-1999
C;Accession: A27804; I65202
R;Shimatsu, A.; Rotwein, P.
J. Biol. Chem. 262, 7894-7900, 1987
A;Title: Mosaic evolution of the insulin-like growth factors. Organization, sequence,
A;Reference number: A27804; MUID:87222423; PMID:3034909
A;Accession: A27804
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-181 <SHI>
A;Cross-references: GB:M15650; GB:J02743; NID:g204296; PIDN:AAA41214.1; PID:g204299
R;Roberts, C.T.
Biochem. Biophys. Res. Commun. 146, 1154-1159, 1987
A;Title: Rat IGF-I cDNA's contain multiple 5'-untranslated regions.
A;Reference number: I52218; MUID:87298553; PMID:3619921
A;Accession: I65202
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-27 <RES>
A;Cross-references: GB:M17594; NID:g204759; PIDN:AAA41390.1; PID:g204760
C;Superfamily: insulin
C;Keywords: alternative splicing

  Query Match           36.0%;  Score 31;  DB 2;  Length 181;
  Best Local Similarity  100.0%;  Pred. No. 2.6e-24;
  Matches   31;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          11 RRAPQTGIVDECCFRSCDLRRLEMYCAPLKP 41
               |||||||||||||||||||||||||||||||
Db          84 RRAPQTGIVDECCFRSCDLRRLEMYCAPLKP 114


RESULT 15
```

J. Mol. Endocrinol. 6, 17-31, 1991
A;Title: The ovine insulin-like growth factor-I gene: characterization, expression and i
A;Reference number: S22877; MUID:91197361; PMID:2015053
A;Accession: S22878
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-138 <DIC>
A;Cross-references: EMBL:X51358
R;Francis, G.L.; McNeil, K.A.; Wallace, J.C.; Ballard, F.J.; Owens, P.C.
Endocrinology 124, 1173-1183, 1989
A;Title: Sheep insulin-like growth factors I and II: sequences, activities and assays.
A;Reference number: S07198; MUID:89136887; PMID:2537174
A;Accession: S07198
A;Molecule type: protein
A;Residues: 34-103 <FRA>
A;Experimental source: fetal plasma
C;Genetics:
A;Introns: 5/3; 59/1; 119/3
C;Superfamily: insulin
C;Keywords: alternative splicing; growth factor; plasma
F;7-33/Domain: propeptide #status predicted <PRO>
F;34-103/Product: insulin-like growth factor I (active) #status experimental <MAT>
F;34-62/Domain: insulin chain B-like #status predicted <DOB>
F;63-74/Domain: insulin connecting peptide-like #status predicted <CHC>
F;75-95/Domain: insulin chain A-like #status predicted <DOA>
F;96-103/Domain: peptide D #status predicted <CHD>
F;104-138/Domain: carboxyl-terminal propeptide (E peptide) #status predicted <CTP>
F;39-81,51-94,80-85/Disulfide bonds: #status predicted

Query Match 46.5%; Score 40; DB 2; Length 138;
Best Local Similarity 100.0%; Pred. No. 1.2e-33;
Matches 40; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLK 40
||||||||||||||||||||||||||||||||||||||||
Db 59 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLK 98

RESULT 10
A33390
insulin-like growth factor I precursor, splice form 1 - sheep
N;Alternate names: somatomedin C
C;Species: Ovis orientalis aries, Ovis ammon aries (domestic sheep)
C;Date: 09-Mar-1990 #sequence_revision 27-Feb-1997 #text_change 23-Jul-1999
C;Accession: S22877; A33390; S07965; S07198
R;Dickson, M.C.; Saunders, J.C.; Gilmour, R.S.
J. Mol. Endocrinol. 6, 17-31, 1991
A;Title: The ovine insulin-like growth factor-I gene: characterization, expression and i
A;Reference number: S22877; MUID:91197361; PMID:2015053
A;Accession: S22877
A;Molecule type: DNA
A;Residues: 1-154 <DIC>
A;Cross-references: EMBL:X51358
R;Wong, E.A.; Ohlsen, S.M.; Godfredson, J.A.; Dean, D.M.; Wheaton, J.E.
DNA 8, 649-657, 1989
A;Title: Cloning of ovine insulin-like growth factor-I cDNAs: heterogeneity in the mRNA
A;Reference number: A33390; MUID:90126234; PMID:2575490
A;Accession: A33390
A;Molecule type: mRNA
A;Residues: 1-43,'SS',46-154 <WON>
A;Cross-references: GB:M30653; NID:g165929; PIDN:AAA80532.1; PID:g165930
R;Hey, A.W.; Browne, C.A.; Simpson, R.J.; Thorburn, G.D.
Biochim. Biophys. Acta 997, 27-35, 1989
A;Title: Simultaneous isolation of insulin-like growth factors I and II from adult sheep
A;Reference number: S04972; MUID:89323215; PMID:2752053
A;Accession: S07965
A;Molecule type: protein
A;Residues: 50-79 <HEY>
R;Francis, G.L.; McNeil, K.A.; Wallace, J.C.; Ballard, F.J.; Owens, P.C.
Endocrinology 124, 1173-1183, 1989
A;Title: Sheep insulin-like growth factors I and II: sequences, activities and assays.
A;Reference number: S07198; MUID:89136887; PMID:2537174
A;Accession: S07198
A;Molecule type: protein
A;Residues: 50-119 <FRA>
A;Experimental source: fetal plasma
C;Genetics:
A;Introns: 21/3; 75/1; 135/3
C;Superfamily: insulin
C;Keywords: alternative splicing; growth factor; plasma
F;1-21/Domain: signal sequence #status predicted <SIG>
F;22-49/Domain: propeptide #status predicted <PRO>
F;50-119/Product: insulin-like growth factor I (active) #status experimental <MAT>
F;50-78/Domain: insulin chain B-like #status predicted <DOB>
F;79-90/Domain: insulin connecting peptide-like #status predicted <CHC>
F;91-111/Domain: insulin chain A-like #status predicted <DOA>
F;112-119/Domain: peptide D #status predicted <CHD>
F;120-154/Domain: carboxyl-terminal propeptide (E peptide) #status predicted <CTP>
F;55-97,67-110,96-101/Disulfide bonds: #status predicted

Query Match 46.5%; Score 40; DB 2; Length 154;
Best Local Similarity 100.0%; Pred. No. 1.3e-33;
Matches 40; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLK 40
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Db 75 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLK 114

RESULT 11
A25540
insulin-like growth factor IA precursor - mouse
N;Alternate names: IGF-IA; somatomedin C
C;Species: Mus musculus (house mouse)
C;Date: 30-Jun-1988 #sequence_revision 30-Jun-1988 #text_change 16-Jul-1999
C;Accession: A25540; I55295; I59090; B25540
R;Bell, G.I.; Stempien, M.M.; Fong, N.M.; Rall, L.B.
Nucleic Acids Res. 14, 7873-7882, 1986
A;Title: Sequences of liver cDNAs encoding two different mouse insulin-like growth factor
A;Reference number: A93643; MUID:87040760; PMID:3774549
A;Accession: A25540
A;Molecule type: mRNA
A;Residues: 1-127 <BEL>
A;Cross-references: GB:X04480; NID:g51801; PIDN:CAA28168.1; PID:g51802
R;Tollefsen, S.E.; Lajara, R.; McCusker, R.H.; Clemmons, D.R.; Rotwein, P.
J. Biol. Chem. 264, 13810-13817, 1989
A;Title: Insulin-like growth factors (IGF) in muscle development. Expression of IGF-I, th
A;Reference number: I55295; MUID:89340472; PMID:2474537
A;Accession: I55295
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Residues: 49-108 <RES>
A;Cross-references: GB:M28139; NID:g341835; PIDN:AAA74553.1; PID:g550489
R;Mathews, L.S.; Norstedt, G.; Palmiter, R.D.
Proc. Natl. Acad. Sci. U.S.A. 83, 9343-9347, 1986
A;Title: Regulation of insulin-like growth factor I gene expression by growth hormone.
A;Reference number: I59090; MUID:87092249; PMID:3467309
A;Accession: I59090
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Residues: 49-108 <RE2>
A;Cross-references: GB:M14983; NID:g194495; PIDN:AAA37925.1; PID:g194496
C;Genetics:
A;Gene: igf1
C;Superfamily: insulin
C;Keywords: alternative splicing; growth factor
F;1-22/Domain: signal sequence #status predicted <SIG>
F;23-127/Product: insulin-like growth factor IA (active) #status predicted <MAT>
F;23-51/Domain: insulin chain B-like #status predicted <DOB>
F;52-63/Domain: insulin connecting C peptide-like #status predicted <DOC>
F;64-84/Domain: insulin chain A-like #status predicted <DOA>
F;85-92/Domain: D peptide #status predicted <DOD>
F;93-127/Domain: carboxyl-terminal propeptide (E peptide) #status predicted <CTP>

Query Match 36.0%; Score 31; DB 2; Length 127;
Best Local Similarity 100.0%; Pred. No. 2e-24;

A;Title: Porcine insulin-like growth factor-I (pIGF-I): complementary deoxyribonucleic a
es.
A;Reference number: A34938; MUID:89096956; PMID:3211153
A;Accession: A34938
A;Molecule type: mRNA
A;Residues: 'Y',21-153 <TAV>
A;Cross-references: GB:M31175
R;Francis, G.L.; Owens, P.C.; McNeil, K.A.; Wallace, J.C.; Ballard, F.J.
J. Endocrinol. 122, 681-687, 1989
A;Title: Purification, amino acid sequences and assay cross-reactivities of porcine insu
A;Reference number: A60738; MUID:90039035; PMID:2809477
A;Accession: A60738
A;Molecule type: protein
A;Residues: 49-117,'X' <FRA>
C;Genetics:
A;Introns: 21/3; 74/1
C;Superfamily: insulin
C;Keywords: growth factor
F;1-22/Domain: signal sequence #status predicted <SIG>
F;23-48/Domain: propeptide #status predicted <PRO>
F;49-153/Product: insulin-like growth factor IA #status experimental <MAT>

Query Match 50.0%; Score 43; DB 2; Length 153;
Best Local Similarity 100.0%; Pred. No. 1e-36;
Matches 43; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
||||||||||||||||||||||||||||||||||||||||||||
Db 74 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 116

RESULT 7
IGHU1B
insulin-like growth factor I precursor, splice form B [validated] - human
N;Alternate names: IGF-IB; somatomedin C
N;Contains: insulin-like growth factor IB-E1 amide
C;Species: Homo sapiens (man)
C;Date: 30-Jun-1987 #sequence_revision 30-Jun-1987 #text_change 31-Dec-2000
C;Accession: A01611; A26181; S30540; B48960; A42664
R;Rotwein, P.; Pollock, K.M.; Didier, D.K.; Krivi, G.G.
J. Biol. Chem. 261, 4828-4832, 1986
A;Title: Organization and sequence of the human insulin-like growth factor I gene. Alter
A;Reference number: A92581; MUID:86168194; PMID:2937782
A;Accession: A01611
A;Molecule type: DNA
A;Residues: 1-195 <ROT1>
A;Cross-references: GB:M14155; NID:g183106; PIDN:AAA52537.1; PID:g183109
R;Rotwein, P.
Proc. Natl. Acad. Sci. U.S.A. 83, 77-81, 1986
A;Title: Two insulin-like growth factor I messenger RNAs are expressed in human liver.
A;Reference number: A26181; MUID:86094355; PMID:3455760
A;Accession: A26181
A;Molecule type: mRNA
A;Residues: 1-195 <ROT2>
A;Cross-references: GB:M11568; NID:g183111; PIDN:AAA52539.1; PID:g183112
R;Sandberg Nordqvist, A.C.; Stahlbom, P.A.; Lake, M.; Sara, V.R.
submitted to the EMBL Data Library, November 1990
A;Description: Nucleotide sequence of the human fetal brain IGF-1b.
A;Reference number: S30540
A;Accession: S30540
A;Molecule type: mRNA
A;Residues: 1-195 <SAN>
A;Cross-references: EMBL:X56774; NID:g32991; PIDN:CAA40093.1; PID:g32992
R;Sandberg-Nordqvist, A.C.; Stahlbom, P.A.; Reinecke, M.; Collins, V.P.; von Holst, H.;
Cancer Res. 53, 2475-2478, 1993
A;Title: Characterization of insulin-like growth factor 1 in human primary brain tumors.
A;Reference number: A48960; MUID:93265440; PMID:8495408
A;Accession: B48960
A;Molecule type: mRNA
A;Residues: 1-195 <SA2>
A;Cross-references: GB:X56774; GB:S61860; NID:g32991; PIDN:CAA40093.1; PID:g32992
A;Experimental source: anaplastic oligodendroglioma
A;Note: sequence modified after extraction from NCBI backbone
A;Note: the authors translated the codon CAG for residues 124 and 133 as Glu
A;Note: sequence extracted from NCBI backbone (NCBIN:133058)
R;Siegfried, J.M.; Kasprzyk, P.G.; Treston, A.M.; Mulshine, J.L.; Quinn, K.A.; Cuttitt
Proc. Natl. Acad. Sci. U.S.A. 89, 8107-8111, 1992
A;Title: A mitogenic peptide amide encoded within the E peptide domain of the insulin-
A;Reference number: A42664; MUID:92390398; PMID:1325646
A;Contents: annotation; IBE-1; amidated carboxyl end
C;Comment: For an alternative splice form, see PIR:IGHU1.
C;Genetics:
A;Gene: GDB:IGF1
A;Cross-references: GDB:120081; OMIM:147440
A;Map position: 12q22-12q24.1
A;Introns: 21/3; 74/1; 134/3
C;Superfamily: insulin
C;Keywords: alternative splicing; amidated carboxyl end; growth factor; plasma
F;1-21/Domain: signal sequence #status predicted <SIG>
F;22-48/Domain: propeptide #status predicted <PRO>
F;49-118/Product: insulin-like growth factor I #status predicted <MAT>
F;49-77/Domain: insulin chain B-like #status predicted <CHB>
F;78-89/Domain: insulin connecting C peptide-like #status predicted <CHC>
F;90-110/Domain: insulin chain A-like #status predicted <CHA>
F;111-118/Domain: D peptide #status predicted <CHD>
F;119-195/Domain: carboxyl-terminal propeptide (E peptide) #status predicted <CHE>
F;151-172/Product: insulin-like growth factor IB-E1 amide #status predicted <MA2>
F;54-96,66-109,95-100/Disulfide bonds: #status predicted
F;172/Modified site: amidated carboxyl end (Arg) (amide in mature form from following

Query Match 50.0%; Score 43; DB 1; Length 195;
Best Local Similarity 100.0%; Pred. No. 1.3e-36;
Matches 43; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
||||||||||||||||||||||||||||||||||||||||||||
Db 74 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 116

RESULT 8
JC2483
insulin-like growth factor-I precursor - goat
C;Species: Capra aegagrus hircus (domestic goat)
C;Date: 16-Mar-1995 #sequence_revision 26-May-1995 #text_change 17-Mar-1999
C;Accession: JC2483
R;Mikawa, S.; Yoshikawa, G.; Aoki, H.; Yamano, Y.; Sakai, H.; Komano, T.
Biosci. Biotechnol. Biochem. 59, 87-92, 1995
A;Title: Dynamic aspects in the expression of the goat insulin-like growth factor-I (I
A;Reference number: JC2483; MUID:95201385; PMID:7765981
A;Accession: JC2483
A;Molecule type: mRNA
A;Residues: 1-154 <MIK>
A;Cross-references: GB:S11378; DDBJ:D26116; DDBJ:D26117; DDBJ:D26118; DDBJ:D26119
C;Genetics:
A;Introns: 21/3; 75/1; 135/3
C;Superfamily: insulin
F;1-49/Domain: signal sequence #status predicted <SIG>
F;50-119/Product: insulin-like growth factor-I #status predicted <MAT>
F;120-154/Region: E domain

Query Match 47.7%; Score 41; DB 2; Length 154;
Best Local Similarity 100.0%; Pred. No. 1.2e-34;
Matches 41; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKP 41
|||||||||||||||||||||||||||||||||||||||||
Db 75 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKP 115

RESULT 9
S22878
insulin-like growth factor I precursor, splice form 2 - sheep
C;Species: Ovis orientalis aries, Ovis ammon aries (domestic sheep)
C;Date: 23-Apr-1999 #sequence_revision 23-Apr-1999 #text_change 23-Jul-1999
C;Accession: S22878; S07198
R;Dickson, M.C.; Saunders, J.C.; Gilmour, R.S.

A;Molecule type: protein
A;Residues: 49-118 <RIN>
R;Karey, K.P.; Marquardt, H.; Sirbasku, D.A.
Blood 74, 1084-1092, 1989
A;Title: Human platelet-derived mitogens. Identification of insulinlike growth factors I
A;Reference number: A60483; MUID:89323462; PMID:2752153
A;Accession: A60483
A;Molecule type: protein
A;Residues: 49-53,'X',55-65,'X',67-75 <KAR>
A;Experimental source: platelet lysate
R;Nordqvist Sandberg, A.C.; Stahlbom, P.A.; Lake, M.; Sara, V.R.
submitted to the EMBL Data Library, November 1990
A;Description: Nucleotide sequence of the human fetal brain IGF-1a.
A;Reference number: S30519
A;Accession: S30519
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-153 <NOR>
A;Cross-references: EMBL:X56773; NID:g32989; PIDN:CAA40092.1; PID:g32990
R;Sandberg-Nordqvist, A.C.; Stahlbom, P.A.; Reinecke, M.; Collins, V.P.; von Holst, H.;
Cancer Res. 53, 2475-2478, 1993
A;Title: Characterization of insulin-like growth factor 1 in human primary brain tumors.
A;Reference number: A48960; MUID:93265440; PMID:8495408
A;Accession: A48960
A;Molecule type: mRNA
A;Residues: 1-123,'E',125-132,'E',134-153 <SAN>
A;Cross-references: GB:X56773; GB:S61841; NID:g32989
A;Experimental source: anaplastic oligodendroglioma
A;Note: sequence extracted from NCBI backbone (NCBIN:133056, NCBIP:133057)
A;Note: sequence inconsistent with the nucleotide translation
R;Rall, L.B.; Scott, J.; Bell, G.I.
Meth. Enzymol. 146, 239-248, 1987
A;Title: Human insulin-like growth factor I and II messenger RNA: isolation of complemen
A;Reference number: I57044; MUID:88065102; PMID:3683205
A;Accession: I57044
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 24-153 <RAL>
A;Cross-references: GB:M29644; NID:g183119; PIDN:AAA52543.1; PID:g183120
C;Comment: The insulin-like growth factors, isolated from plasma, are structurally and f
C;Comment: For an alternative splice form, see PIR:IGHU1B.
C;Genetics:
A;Gene: GDB:IGF1
A;Cross-references: GDB:120081; OMIM:147440
A;Map position: 12q22-12q24.1
A;Introns: 21/3; 74/1; 134/3
C;Superfamily: insulin
C;Keywords: alternative splicing; growth factor; plasma
F;1-21/Domain: signal sequence #status predicted <SIG>
F;22-48/Domain: propeptide #status predicted <PRO>
F;49-118/Product: insulin-like growth factor I #status experimental <MAT>
F;49-77/Domain: insulin chain B-like #status experimental <CHB>
F;78-89/Domain: insulin connecting C peptide-like #status experimental <CHC>
F;90-110/Domain: insulin chain A-like #status experimental <CHA>
F;111-118/Domain: D peptide #status experimental <CHD>
F;119-153/Domain: carboxyl-terminal propeptide (E peptide) #status predicted <CPRO>
F;54-96,66-109,95-100/Disulfide bonds: #status predicted

Query Match 50.0%; Score 43; DB 1; Length 153;
Best Local Similarity 100.0%; Pred. No. 1e-36;
Matches 43; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
||||||||||||||||||||||||||||||||||||||||||||
Db 74 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 116

RESULT 5
IGBO1
insulin-like growth factor IA precursor - bovine (fragment)
N;Alternate names: IGF-I; somatomedin C
C;Species: Bos primigenius taurus (cattle)
C;Date: 31-Mar-1988 #sequence_revision 28-Apr-1995 #text_change 18-Jun-1999
C;Accession: S12672; A25623; S00465
R;Fotsis, T.; Murphy, C.; Gannon, F.
Nucleic Acids Res. 18, 676, 1990
A;Title: Nucleotide sequence of the bovine insulin-like growth factor 1 (IGF-1) and its
A;Reference number: S12672; MUID:90175014; PMID:2308858
A;Accession: S12672
A;Molecule type: mRNA
A;Residues: 1-153 <FOT>
A;Cross-references: EMBL:X15726; NID:g454; PIDN:CAA33746.1; PID:g455
A;Experimental source: liver
R;Honegger, A.; Humbel, R.E.
J. Biol. Chem. 261, 569-575, 1986
A;Title; Insulin-like growth factors I and II in fetal and adult bovine serum. Purificati
A;Reference number: A92585; MUID:86085881; PMID:3941093
A;Accession: A25623
A;Molecule type: protein
A;Residues: 49-118 <HON>
R;Francis, G.L.; Upton, F.M.; Ballard, F.J.; McNeil, K.A.; Wallace, J.C.
Biochem. J. 251, 95-103, 1988
A;Title: Insulin-like growth factors 1 and 2 in bovine colostrum. Sequences and biologica
A;Reference number: S00465; MUID:88268820; PMID:3390164
A;Accession: S00465
A;Molecule type: protein
A;Residues: 49-118 <FRA>
A;Experimental source: colostrum
A;Note: a form of IGF-I lacking the first three residues and possessing enhanced biologi
C;Superfamily: insulin
C;Keywords: alternative splicing; colostrum; growth factor; plasma
F;1-20/Domain: signal sequence (fragment) #status predicted <SIG>
F;22-48/Domain: propeptide #status predicted <PRO>
F;49-118/Product: insulin-like growth factor IA (active) #status experimental <MAT>
F;49-77/Domain: insulin B chain-like #status experimental <DOB>
F;78-89/Domain: insulin connecting C peptide-like #status experimental <CHC>
F;90-110/Domain: insulin A chain-like #status experimental <DOA>
F;111-118/Domain: D peptide #status experimental <CHD>
F;119-153/Domain: carboxyl-terminal propeptide (E peptide) #status predicted <CPR>
F;54-96,66-109,95-100/Disulfide bonds: #status predicted

Query Match 50.0%; Score 43; DB 1; Length 153;
Best Local Similarity 100.0%; Pred. No. 1e-36;
Matches 43; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
||||||||||||||||||||||||||||||||||||||||||||
Db 74 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 116

RESULT 6
S12825
insulin-like growth factor I precursor - pig
N;Alternate names: somatomedin C
C;Species: Sus scrofa domestica (domestic pig)
C;Date: 13-Jan-1995 #sequence_revision 13-Jan-1995 #text_change 16-Jul-1999
C;Accession: S12825; S21488; A34938; A60738
R;Mueller, M.; Brem, G.
Nucleic Acids Res. 18, 364, 1990
A;Title: Nucleotide sequence of porcine insulin-like growth factor I: 5' untranslated reg
A;Reference number: S12825; MUID:90221822; PMID:2326169
A;Accession: S12825
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-153 <MUE>
A;Cross-references: EMBL:X52388
R;Dickson, M.C.; Huskisson, N.S.; Gilmour, R.S.
submitted to the EMBL Data Library, November 1989
A;Description: Porcine Insulin-like growth factor gene: sequence of exon and 5' non-codi
A;Reference number: S21488
A;Accession: S21488
A;Molecule type: DNA
A;Residues: 1-21 <DIC>
A;Cross-references: EMBL:X17638; NID:g1995; PIDN:CAA35632.1; PID:g1996
R;Tavakkol, A.; Simmen, F.A.; Simmen, R.C.M.
Mol. Endocrinol. 2, 674-681, 1988

ALIGNMENTS

RESULT 1
PN0622
insulin-like growth factor Ia precursor - dog (fragment)
C;Species: Canis lupus familiaris (dog)
C;Date: 10-Mar-1994 #sequence_revision 10-Mar-1994 #text_change 07-May-1999
C;Accession: PN0622
R;Delafontaine, P.; Lou, H.; Harrison, D.G.; Bernstein, K.E.
Gene 130, 305-306, 1993
A;Title: Sequence of a cDNA encoding dog insulin-like growth factor I.
A;Reference number: PN0622; MUID:93366192; PMID:8359700
A;Accession: PN0622
A;Molecule type: mRNA
A;Residues: 1-122 <DEL>
C;Comment: This protein is a potent inducer of DNA synthesis in multiple cell types, act
C;Genetics:
A;Gene: IGFIa
C;Superfamily: insulin
C;Keywords: growth factor
F;20-89/Product: insulin-like growth factor Ia (fragment) #status predicted <MAT>

Query Match 50.0%; Score 43; DB 2; Length 122;
Best Local Similarity 100.0%; Pred. No. 8.7e-37;
Matches 43; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
||||||||||||||||||||||||||||||||||||||||||||
Db 45 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 87

RESULT 2
IGGP1
insulin-like growth factor I precursor - guinea pig
C;Species: Cavia porcellus (guinea pig)
C;Date: 30-Sep-1991 #sequence_revision 30-Sep-1991 #text_change 07-Nov-1997
C;Accession: S12719
R;Bell, G.I.; Stempien, M.M.; Fong, N.M.; Seino, S.
Nucleic Acids Res. 18, 4275, 1990
A;Title: Sequence of a cDNA encoding guinea pig IGF-I.
A;Reference number: S12719; MUID:90332447; PMID:2377480
A;Accession: S12719
A;Molecule type: mRNA
A;Residues: 1-137 <BEL>
A;Cross-references: EMBL:X52951
A;Note: it is uncertain whether Met-1 or Met-8 is the initiator
C;Superfamily: insulin
C;Keywords: glycoprotein; growth factor; plasma
F;1-32/Domain: signal sequence #status predicted <SIG>
F;33-102/Product: insulin-like growth factor I #status predicted <MAT>
F;33-61/Domain: insulin chain B-like #status predicted <CHB>
F;62-73/Domain: insulin connecting C peptide-like #status predicted <CHC>
F;74-94/Domain: insulin chain A-like #status predicted <CHA>
F;95-102/Domain: D peptide #status predicted <CHD>
F;103-137/Domain: carboxyl-terminal propeptide (E peptide) #status predicted <CHE>
F;124/Binding site: carbohydrate (Asn) (covalent) #status predicted

Query Match 50.0%; Score 43; DB 1; Length 137;
Best Local Similarity 100.0%; Pred. No. 9.6e-37;
Matches 43; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
||||||||||||||||||||||||||||||||||||||||||||
Db 58 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 100

RESULT 3
A36552
insulin-like growth factor 1a precursor - human
C;Species: Homo sapiens (man)
C;Date: 12-Apr-1991 #sequence_revision 12-Apr-1991 #text_change 16-Jul-1999
C;Accession: A36552
R;Tobin, G.; Yee, D.; Bruenner, N.; Rotwein, P.
Mol. Endocrinol. 4, 1914-1920, 1990
A;Title: A novel human insulin-like growth factor I messenger RNA is expressed in norm
A;Reference number: A36552; MUID:91187000; PMID:2082190
A;Accession: A36552
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-137 <TOB>
A;Cross-references: GB:M37484; NID:g184833; PIDN:AAA52789.1; PID:g184834
C;Superfamily: insulin

Query Match 50.0%; Score 43; DB 2; Length 137;
Best Local Similarity 100.0%; Pred. No. 9.6e-37;
Matches 43; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
||||||||||||||||||||||||||||||||||||||||||||
Db 58 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 100

RESULT 4
IGHU1
insulin-like growth factor I precursor, splice form A [validated] - human
N;Alternate names: IGF-I long splice form precursor; IGF-IA; somatomedin C
C;Species: Homo sapiens (man)
C;Date: 24-Apr-1984 #sequence_revision 30-Jun-1987 #text_change 31-Dec-2000
C;Accession: A92581; A23614; A93321; JT0571; A23622; A92226; A60483; S30519; A48960; I
R;Rotwein, P.; Pollock, K.M.; Didier, D.K.; Krivi, G.G.
J. Biol. Chem. 261, 4828-4832, 1986
A;Title: Organization and sequence of the human insulin-like growth factor I gene. Alt
A;Reference number: A92581; MUID:86168194; PMID:2937782
A;Accession: A92581
A;Molecule type: DNA
A;Residues: 1-153 <ROT>
A;Cross-references: GB:M14156; NID:g183107; PIDN:AAA52538.1; PID:g183110
R;de Pagter-Holthuizen, P.; van Schaik, F.M.A.; Verduijn, G.M.; van Ommen, G.J.B.; Bou
FEBS Lett. 195, 179-184, 1986
A;Title: Organization of the human genes for insulin-like growth factors I and II.
A;Reference number: A91356; MUID:86108862; PMID:3002851
A;Accession: A23614
A;Molecule type: DNA
A;Residues: 24-153 <DEP>
A;Cross-references: GB:X03420; GB:X00362; NID:g33020; PIDN:CAA27152.1; PID:g33021; GB:
R;Jansen, M.; van Schaik, F.M.A.; Ricker, A.T.; Bullock, B.; Woods, D.E.; Gabbay, K.H.
Nature 306, 609-611, 1983
A;Title: Sequence of cDNA encoding human insulin-like growth factor I precursor.
A;Reference number: A93321; MUID:84068210; PMID:6358902
A;Accession: A93321
A;Molecule type: mRNA
A;Residues: 1-153 <JAN>
A;Cross-references: GB:X00173; NID:g33015; PIDN:CAA24998.1; PID:g33016
A;Note: Met-24 is proposed as a likely initiator
R;Steenbergh, P.H.; Koonen-Reemst, A.M.C.B.; Cleutjens, C.B.J.M.; Sussenbach, J.S.
Biochem. Biophys. Res. Commun. 175, 507-514, 1991
A;Title: Complete nucleotide sequence of the high molecular weight human IGF-I mRNA.
A;Reference number: JT0571; MUID:91207342; PMID:2018498
A;Accession: JT0571
A;Molecule type: mRNA
A;Residues: 1-153 <STE>
A;Cross-references: EMBL:X57025; NID:g33007; PIDN:CAA40342.1; PID:g33008
R;Le Bouc, Y.; Dreyer, D.; Jaeger, F.; Binoux, M.; Sondermeyer, P.
FEBS Lett. 196, 108-112, 1986
A;Title: Complete characterization of the human IGF-I nucleotide sequence isolated fro
A;Reference number: A23622; MUID:86108910; PMID:2935423
A;Accession: A23622
A;Molecule type: mRNA
A;Residues: 1-153 <LEB>
A;Cross-references: GB:M27544; NID:g184829; PIDN:AAA52787.1; PID:g306927
R;Rinderknecht, E.; Humbel, R.E.
J. Biol. Chem. 253, 2769-2776, 1978
A;Title: The amino acid sequence of human insulin-like growth factor I and its structu
A;Reference number: A92226; MUID:78130171; PMID:632300
A;Accession: A92226

GenCore version 5.1.6

OM protein - protein search, using sw model

Run on: March 3, 2004, 12:07:27 ; Search time 21 Seconds
(without alignments)
393.927 Million cell updates/sec

Title: US-09-852-261-6_COPY_26_111
Perfect score: 86
Sequence: 1 NKPTGYGSSSRRAPQTGIVD.....TNKKMKSQRRRKGSTFEEHK 86

Scoring table: OLIGO
Gapop 60.0 , Gapext 60.0

Searched: 283366 seqs, 96191526 residues

Word size : 0

Total number of hits satisfying chosen parameters: 283366

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Listing first 100 summaries

Database : PIR_78:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	43	50.0	122	2	PN0622	insulin-like growt
2	43	50.0	137	1	IGGP1	insulin-like growt
3	43	50.0	137	2	A36552	insulin-like growt
4	43	50.0	153	1	IGHU1	insulin-like growt
5	43	50.0	153	1	IGBO1	insulin-like growt
6	43	50.0	153	2	S12825	insulin-like growt
7	43	50.0	195	1	IGHU1B	insulin-like growt
8	41	47.7	154	2	JC2483	insulin-like growt
9	40	46.5	138	2	S22878	insulin-like growt
10	40	46.5	154	2	A33390	insulin-like growt
11	31	36.0	127	2	A25540	insulin-like growt
12	31	36.0	153	2	B27804	insulin-like growt
13	31	36.0	159	2	A26859	insulin-like growt
14	31	36.0	181	2	A27804	insulin-like growt
15	26	30.2	127	2	B40912	insulin-like growt
16	26	30.2	133	2	A40912	insulin-like growt
17	15	17.4	149	2	D54270	insulin-like growt
18	15	17.4	155	2	C44012	insulin-like growt
19	15	17.4	161	2	C54270	insulin-like growt
20	15	17.4	176	2	A41396	insulin-like growt
21	15	17.4	176	2	A46244	insulin-like growt
22	15	17.4	188	2	A54270	insulin-like growt
23	15	17.4	188	2	B54270	insulin-like growt
24	14	16.3	153	2	A36079	insulin-like growt
25	14	16.3	153	2	A41399	insulin-like growt
26	9	10.5	44	2	A34049	insulin-like growt
27	9	10.5	79	2	I51240	insulin-like growt
28	9	10.5	93	2	I53642	insulin-like growt
29	9	10.5	128	2	I57671	insulin-like growt
30	9	10.5	155	1	IGBO2	insulin-like growt
31	9	10.5	179	2	S04858	insulin-like growt
32	9	10.5	180	1	IGHU2	insulin-like growt
33	9	10.5	180	1	IGRT2	insulin-like growt
34	9	10.5	180	2	A24913	insulin-like growt
35	9	10.5	181	2	B60738	insulin-like growt
36	9	10.5	183	2	S02423	insulin-like growt
37	9	10.5	183	2	I67610	insulin-like growt
38	9	10.5	187	2	T10897	insulin-like growt
39	9	10.5	210	2	S66484	insulin-like growt
40	9	10.5	214	2	B46244	insulin-like growt
41	8	9.3	471	2	B86170	ADK1 [imported] -
42	8	9.3	769	2	A71403	probable transport
43	7	8.1	19	2	A21182	4K prothoracicotro
44	7	8.1	82	2	S69480	bombyxin A-10 prec
45	7	8.1	87	2	S69490	bombyxin B-10 prec
46	7	8.1	87	2	JQ0836	bombyxin B-10 - si
47	7	8.1	88	2	S69489	bombyxin B-8 precu
48	7	8.1	89	1	IPMTA2	bombyxin A-2 precu
49	7	8.1	89	2	S69484	bombyxin A-8 precu
50	7	8.1	89	2	S69483	bombyxin A-8 precu
51	7	8.1	90	1	IPMTB1	bombyxin B-1 precu
52	7	8.1	90	1	IPMTB2	bombyxin B-2 precu
53	7	8.1	90	2	S69486	bombyxin B-6 precu
54	7	8.1	90	2	S69487	bombyxin B-7 precu
55	7	8.1	90	2	S69488	bombyxin B-7 precu
56	7	8.1	90	2	S69491	bombyxin B-3 precu
57	7	8.1	90	2	S69495	bombyxin B-9 precu
58	7	8.1	90	2	S69485	bombyxin B-4 precu
59	7	8.1	90	2	JQ0835	bombyxin B-5 precu
60	7	8.1	91	2	A60296	bombyxin C-1 precu
61	7	8.1	92	1	IPMTA3	bombyxin A-3 precu
62	7	8.1	92	2	S69478	bombyxin A-6 precu
63	7	8.1	92	2	S69477	bombyxin A-4 precu
64	7	8.1	92	2	A48322	bombyxin A-1 precu
65	7	8.1	92	2	S69482	bombyxin A-7 precu
66	7	8.1	92	2	S69481	bombyxin A-7 precu
67	7	8.1	92	2	S69479	bombyxin A-5 precu
68	7	8.1	92	2	JQ0825	bombyxin A-9 precu
69	7	8.1	93	2	S69496	bombyxin B-11 prec
70	7	8.1	95	2	S69498	bombyxin C-2 precu
71	7	8.1	151	2	T09884	hypothetical prote
72	7	8.1	152	2	T03173	gelatinase homolog
73	7	8.1	193	2	A53697	insulin-like growt
74	7	8.1	224	2	C86192	protein T20M3.4 [i
75	7	8.1	226	2	F75307	hypothetical prote
76	7	8.1	247	2	AC2786	SEC-independent pr
77	7	8.1	247	2	E97565	hypothetical prote
78	7	8.1	273	2	B70550	probable citE prot
79	7	8.1	304	2	C71163	probable oligopept
80	7	8.1	309	2	G75068	abc transporter PA
81	7	8.1	310	2	A71439	hypothetical prote
82	7	8.1	358	2	I46532	protein co-factor
83	7	8.1	372	2	F90159	sarcosine oxidase,
84	7	8.1	389	2	T29488	hypothetical prote
85	7	8.1	423	2	G96554	hypothetical prote
86	7	8.1	429	2	H90157	aspartyl-tRNA synt
87	7	8.1	458	2	C87620	cytochrome P450 fa
88	7	8.1	560	2	T51485	sugar transporter-
89	7	8.1	672	2	F71424	hypothetical prote
90	7	8.1	741	2	JS0375	hypothetical 85.8K
91	7	8.1	885	1	VGBESA	glycoprotein B pre
92	7	8.1	1258	2	T30252	nuclear protein SA
93	7	8.1	1314	2	A85176	hypothetical prote
94	7	8.1	1391	2	T20406	hypothetical prote
95	7	8.1	1652	2	T16799	hypothetical prote
96	6	7.0	66	2	A60740	insulin-like growt
97	6	7.0	67	2	T00991	hypothetical prote
98	6	7.0	85	2	B70923	hypothetical prote
99	6	7.0	90	2	S69492	bombyxin B-12 prec
100	6	7.0	97	1	ISPSMP	muconolactone Delt

Search completed: March 3, 2004, 12:09:43
Job time : 14 secs

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  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          21 ECCFRSCDL 29
               |||||||||
Db          44 ECCFRSCDL 52


RESULT 24
IGF2_CAVPO
ID   IGF2_CAVPO     STANDARD;      PRT;   128 AA.
AC   Q08279;
DT   01-FEB-1995 (Rel. 31, Created)
DT   01-FEB-1995 (Rel. 31, Last sequence update)
DT   10-OCT-2003 (Rel. 42, Last annotation update)
DE   Insulin-like growth factor II precursor (IGF-II) (Somatomedin A)
DE   (Fragment).
GN   IGF2.
OS   Cavia porcellus (Guinea pig).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Hystricognathi; Caviidae; Cavia.
OX   NCBI_TaxID=10141;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=Hartley; TISSUE=Liver;
RX   MEDLINE=93246007; PubMed=1301379;
RA   Levinovitz A., Norstedt G., van den Berg S., Robinson I.C.A.F.,
RA   Ekstroem T.J.;
RT   "Isolation of an insulin-like growth factor II cDNA from guinea pig
RT   liver: expression and developmental regulation.";
RL   Mol. Cell. Endocrinol. 89:105-110(1992).
CC   -!- FUNCTION: The insulin-like growth factors possess growth-promoting
CC       activity. In vitro, they are potent mitogens for cultured cells.
CC       IGF-II is influenced by placental lactogen and may play a role in
CC       fetal development.
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- DEVELOPMENTAL STAGE: EXPRESSED PREDOMINANTLY IN FETAL TISSUES AND
CC       AT LOWER LEVELS IN ADULT.
CC   -!- SIMILARITY: Belongs to the insulin family.
CC   ---------------------------------------------------------------------
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CC   between the Swiss Institute of Bioinformatics and the EMBL outstation -
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CC   entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; S59899; AAB26479.1; -.
DR   PIR; I57671; I57671.
DR   HSSP; P01344; 1GF2.
DR   InterPro; IPR004825; Ins/IGF/relax.
DR   Pfam; PF00049; Insulin; 1.
DR   PRINTS; PR00277; INSULINB.
DR   SMART; SM00078; I1GF; 1.
DR   PROSITE; PS00262; INSULIN; 1.
KW   Insulin family; Mitogen; Growth factor; Signal.
FT   SIGNAL        1     24       BY SIMILARITY.
FT   CHAIN        25     91       INSULIN-LIKE GROWTH FACTOR II.
FT   DOMAIN       25     52       B.
FT   DOMAIN       53     64       C.
FT   DOMAIN       65     85       A.
FT   DOMAIN       86     91       D.
FT   PROPEP       92   >128       E PEPTIDE (BY SIMILARITY).
FT   DISULFID     33     71       BY SIMILARITY.
FT   DISULFID     45     84       BY SIMILARITY.
FT   DISULFID     70     75       BY SIMILARITY.
FT   NON_TER     128    128
SQ   SEQUENCE   128 AA;  14419 MW;  BC65A1D81A4CE056 CRC64;

  Query Match             10.5%;  Score 9;  DB 1;  Length 128;
  Best Local Similarity   100.0%;  Pred. No. 0.029;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          21 ECCFRSCDL 29
               |||||||||
Db          69 ECCFRSCDL 77


RESULT 25
IGF2_MUSVI
ID   IGF2_MUSVI     STANDARD;      PRT;   129 AA.
AC   P41694;
DT   01-NOV-1995 (Rel. 32, Created)
DT   01-NOV-1995 (Rel. 32, Last sequence update)
DT   10-OCT-2003 (Rel. 42, Last annotation update)
DE   Insulin-like growth factor II precursor (IGF-II) (Fragment).
GN   IGF2.
OS   Mustela vison (American mink).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Carnivora; Fissipedia; Mustelidae; Mustelinae;
OC   Mustela.
OX   NCBI_TaxID=9667;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Liver;
RX   MEDLINE=93307613; PubMed=7686523;
RA   Ekstroem T.J., Baecklin B.M., Lindqvist Y., Engstroem W.;
RT   "Insulin-like growth factor II in the mink (Mustela vison):
RT   determination of a cDNA nucleotide sequence and developmental
RT   regulation of its expression.";
RL   Gen. Comp. Endocrinol. 90:243-250(1993).
CC   -!- FUNCTION: The insulin-like growth factors possess growth-promoting
CC       activity. In vitro, they are potent mitogens for cultured cells.
CC       IGF-II is influenced by placental lactogen and may play a role in
CC       fetal development.
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- SIMILARITY: Belongs to the insulin family.
CC   ---------------------------------------------------------------------
CC   This SWISS-PROT entry is copyright. It is produced through a collaboration
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CC   use by non-profit institutions as long as its content is in no way
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CC   entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; S63459; AAB27392.2; -.
DR   HSSP; P01344; 1GF2.
DR   InterPro; IPR004825; Ins/IGF/relax.
DR   Pfam; PF00049; Insulin; 1.
DR   PRINTS; PR00277; INSULINB.
DR   SMART; SM00078; I1GF; 1.
DR   PROSITE; PS00262; INSULIN; 1.
KW   Insulin family; Mitogen; Growth factor; Signal.
FT   SIGNAL        1     24       BY SIMILARITY.
FT   CHAIN        25     92       INSULIN-LIKE GROWTH FACTOR II.
FT   DOMAIN       25     52       B.
FT   DOMAIN       53     65       C.
FT   DOMAIN       66     86       A.
FT   DOMAIN       87     92       D.
FT   PROPEP       93   >129       E PEPTIDE (BY SIMILARITY).
FT   DISULFID     33     72       BY SIMILARITY.
FT   DISULFID     45     85       BY SIMILARITY.
FT   DISULFID     71     76       BY SIMILARITY.
FT   NON_TER     129    129
SQ   SEQUENCE   129 AA;  14436 MW;  FD06661DAFB473D0 CRC64;

  Query Match             10.5%;  Score 9;  DB 1;  Length 129;
  Best Local Similarity   100.0%;  Pred. No. 0.029;
  Matches    9;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          21 ECCFRSCDL 29
               |||||||||
Db          70 ECCFRSCDL 78
```

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DR   Pfam; PF00049; Insulin; 1.
DR   PRINTS; PR00277; INSULINB.
DR   SMART; SM00078; IlGF; 1.
DR   PROSITE; PS00262; INSULIN; 1.
KW   Insulin family; Growth factor; Plasma; Signal.
FT   SIGNAL        1      ?       POTENTIAL.
FT   PROPEP        ?     44       POTENTIAL.
FT   CHAIN        45    114       INSULIN-LIKE GROWTH FACTOR I, ADULT FORM.
FT   DOMAIN       45     73       B.
FT   DOMAIN       74     85       C.
FT   DOMAIN       86    106       A.
FT   DOMAIN      107    114       D.
FT   PROPEP      115    161       E PEPTIDE.
FT   DISULFID     50     92       BY SIMILARITY.
FT   DISULFID     62    105       BY SIMILARITY.
FT   DISULFID     91     96       BY SIMILARITY.
SQ   SEQUENCE   161 AA;  17915 MW;  B949960563391AF8 CRC64;

  Query Match             11.6%;  Score 10;  DB 1;  Length 161;
  Best Local Similarity   100.0%;  Pred. No. 0.0031;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          29 LRRLEMYCAP 38
               ||||||||||
Db          98 LRRLEMYCAP 107


RESULT 22
IGFB_CYPCA
ID   IGFB_CYPCA     STANDARD;      PRT;   161 AA.
AC   Q90326;
DT   01-NOV-1997 (Rel. 35, Created)
DT   01-NOV-1997 (Rel. 35, Last sequence update)
DT   10-OCT-2003 (Rel. 42, Last annotation update)
DE   Insulin-like growth factor I, juvenile form precursor.
OS   Cyprinus carpio (Common carp).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Actinopterygii; Neopterygii; Teleostei; Ostariophysi; Cypriniformes;
OC   Cyprinidae; Cyprinus.
OX   NCBI_TaxID=7962;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Liver;
RX   MEDLINE=97283739; PubMed=9137817;
RA   Hashimoto H., Mikawa S., Takayama E., Yokoyama Y., Toyohara H.,
RA   Sakaguchi M.;
RT   "Molecular cloning and growth hormone-regulated gene expression of
RT   carp insulin-like growth factor-I.";
RL   Biochem. Mol. Biol. Int. 41:877-886(1997).
CC   -!- FUNCTION: The insulin-like growth factors, isolated from plasma,
CC       are structurally and functionally related to insulin but have a
CC       much higher growth-promoting activity.
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- SIMILARITY: Belongs to the insulin family.
CC   ---------------------------------------------------------------------
CC   This SWISS-PROT entry is copyright. It is produced through a collaboration
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CC   use by non-profit institutions as long as its content is in no way
CC   modified and this statement is not removed. Usage by and for commercial
CC   entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; D83272; BAA11879.1; -.
DR   HSSP; P01343; 1GF1.
DR   InterPro; IPR004825; Ins/IGF/relax.
DR   Pfam; PF00049; Insulin; 1.
DR   PRINTS; PR00277; INSULINB.
DR   SMART; SM00078; IlGF; 1.
DR   PROSITE; PS00262; INSULIN; 1.
KW   Insulin family; Growth factor; Plasma; Signal.
FT   SIGNAL        1      ?       POTENTIAL.
FT   PROPEP        ?     44       POTENTIAL.
FT   CHAIN        45    114       INSULIN-LIKE GROWTH FACTOR I, JUVENILE
FT                                FORM.
FT   DOMAIN       45     73       B.
FT   DOMAIN       74     85       C.
FT   DOMAIN       86    106       A.
FT   DOMAIN      107    114       D.
FT   PROPEP      115    161       E PEPTIDE.
FT   DISULFID     50     92       BY SIMILARITY.
FT   DISULFID     62    105       BY SIMILARITY.
FT   DISULFID     91     96       BY SIMILARITY.
SQ   SEQUENCE   161 AA;  17918 MW;  A48BB63F5BBCDC2A CRC64;

  Query Match             11.6%;  Score 10;  DB 1;  Length 161;
  Best Local Similarity   100.0%;  Pred. No. 0.0031;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          29 LRRLEMYCAP 38
               ||||||||||
Db          98 LRRLEMYCAP 107


RESULT 23
IGF2_CHICK
ID   IGF2_CHICK     STANDARD;      PRT;    66 AA.
AC   P33717;
DT   01-FEB-1994 (Rel. 28, Created)
DT   01-FEB-1994 (Rel. 28, Last sequence update)
DT   10-OCT-2003 (Rel. 42, Last annotation update)
DE   Insulin-like growth factor II (IGF-II).
GN   IGF2.
OS   Gallus gallus (Chicken).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
OC   Gallus.
OX   NCBI_TaxID=9031;
RN   [1]
RP   SEQUENCE.
RX   MEDLINE=90132351; PubMed=1688912;
RA   Kallincos N.C., Wallace J.C., Francis G.L., Ballard F.J.;
RT   "Chemical and biological characterization of chicken insulin-like
RT   growth factor-II.";
RL   J. Endocrinol. 124:89-97(1990).
RN   [2]
RP   SEQUENCE OF 1-35.
RX   MEDLINE=88244560; PubMed=3379351;
RA   Dawe S.R., Francis G.L., McNamara P.J., Wallace J.C., Ballard F.J.;
RT   "Purification, partial sequences and properties of chicken
RT   insulin-like growth factors.";
RL   J. Endocrinol. 117:173-181(1988).
CC   -!- FUNCTION: The insulin-like growth factors possess growth-promoting
CC       activity. In vitro, they are potent mitogens for cultured cells.
CC       IGF-II is influenced by placental lactogen and may play a role in
CC       fetal development.
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- SIMILARITY: Belongs to the insulin family.
DR   HSSP; P01344; 1GF2.
DR   InterPro; IPR004825; Ins/IGF/relax.
DR   Pfam; PF00049; Insulin; 1.
DR   PRINTS; PR00277; INSULINB.
DR   SMART; SM00078; IlGF; 1.
DR   PROSITE; PS00262; INSULIN; 1.
KW   Insulin family; Mitogen; Growth factor.
FT   DOMAIN        1     27       B.
FT   DOMAIN       28     39       C.
FT   DOMAIN       40     60       A.
FT   DOMAIN       61     66       D.
FT   DISULFID      8     46       BY SIMILARITY.
FT   DISULFID     20     59       BY SIMILARITY.
FT   DISULFID     45     50       BY SIMILARITY.
SQ   SEQUENCE   66 AA;  7298 MW;  A018C0E71D5EB1E2 CRC64;

  Query Match             10.5%;  Score 9;  DB 1;  Length 66;
  Best Local Similarity   100.0%;  Pred. No. 0.016;
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GenCore version 5.1.6

OM protein - protein search, using sw model

Run on: March 3, 2004, 12:07:06 ; Search time 38 Seconds
(without alignments)
714.068 Million cell updates/sec

Title: US-09-852-261-6_COPY_26_111
Perfect score: 86
Sequence: 1 NKPTGYGSSSRRAPQTGIVD.....TNKKMKSQRRRKGSTFEEHK 86

Scoring table: OLIGO
Gapop 60.0 , Gapext 60.0

Searched: 1017041 seqs, 315518202 residues

Word size : 0

Total number of hits satisfying chosen parameters: 1017041

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Listing first 100 summaries

Database : SPTREMBL_25:*
1: sp_archea:*
2: sp_bacteria:*
3: sp_fungi:*
4: sp_human:*
5: sp_invertebrate:*
6: sp_mammal:*
7: sp_mhc:*
8: sp_organelle:*
9: sp_phage:*
10: sp_plant:*
11: sp_rodent:*
12: sp_virus:*
13: sp_vertebrate:*
14: sp_unclassified:*
15: sp_rvirus:*
16: sp_bacteriap:*
17: sp_archeap:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	52	60.5	66	6	Q9N1S6	Q9n1s6 capreolus c
2	43	50.0	130	4	Q9NP10	Q9np10 homo sapien
3	43	50.0	133	6	Q9N1C1	Q9n1c1 bos taurus
4	43	50.0	137	4	Q14620	Q14620 homo sapien
5	43	50.0	139	4	Q13429	Q13429 homo sapien
6	43	50.0	139	6	P79167	P79167 equus cabal
7	41	47.7	57	6	Q28236	Q28236 cervus elap
8	31	36.0	69	6	O02807	O02807 bubalus bub
9	31	36.0	127	11	P97899	P97899 rattus sp.
10	31	36.0	153	11	Q8C4U6	Q8c4u6 mus musculu
11	31	36.0	165	11	Q8CAR0	Q8car0 mus musculu
12	18	20.9	50	6	Q27962	Q27962 bos taurus
13	15	17.4	104	13	Q7T107	Q7t107 dicentrarch
14	15	17.4	108	13	Q800N0	Q800n0 morone chry
15	15	17.4	108	13	Q800M9	Q800m9 morone saxa
16	15	17.4	108	13	Q800M8	Q800m8 morone chry
17	15	17.4	108	13	Q800M7	Q800m7 morone amer
18	15	17.4	116	13	Q91161	Q91161 oncorhynchu
19	15	17.4	117	13	Q91476	Q91476 salmo salar
20	15	17.4	145	13	Q91475	Q91475 salmo salar
21	15	17.4	149	13	Q91231	Q91231 oncorhynchu
22	15	17.4	155	13	Q91162	Q91162 oncorhynchu
23	15	17.4	159	13	O93607	O93607 paralichthy
24	15	17.4	161	13	Q91230	Q91230 oncorhynchu
25	15	17.4	185	13	O57436	O57436 paralichthy
26	15	17.4	185	13	Q9YI57	Q9yi57 acanthopagr
27	15	17.4	186	13	Q9PSX5	Q9psx5 paralichthy
28	15	17.4	186	13	O93527	O93527 paralichthy
29	15	17.4	186	13	Q800Y5	Q800y5 siganus gut
30	15	17.4	186	13	Q7T1A7	Q7t1a7 perca flave
31	15	17.4	188	13	P81268	P81268 oncorhynchu
32	15	17.4	188	13	Q91965	Q91965 oncorhynchu
33	14	16.3	153	13	O93380	O93380 meleagris g
34	13	15.1	184	13	O42336	O42336 myoxocephal
35	11	12.8	86	6	Q8SQC4	Q8sqc4 trichosurus
36	10	11.6	117	13	Q9I9I4	Q9i9i4 ctenopharyn
37	10	11.6	161	13	Q90VV9	Q90vv9 brachydanio
38	10	11.6	161	13	Q9PWK2	Q9pwk2 carassius a
39	10	11.6	161	13	Q98SR6	Q98sr6 megalobrama
40	10	11.6	161	13	Q9YI82	Q9yi82 carassius a
41	10	11.6	161	13	Q800D5	Q800d5 megalobrama
42	10	11.6	178	13	Q9IBI0	Q9ibi0 cyprinus ca
43	9	10.5	53	13	Q90YK0	Q90yk0 gallus gall
44	9	10.5	62	6	Q9XS88	Q9xs88 equus cabal
45	9	10.5	62	13	Q9IAA0	Q9iaa0 carassius a
46	9	10.5	79	13	P81416	P81416 oncorhynchu
47	9	10.5	92	13	Q8UWF9	Q8uwf9 salmo salar
48	9	10.5	104	6	Q862E7	Q862e7 bos taurus
49	9	10.5	106	6	Q9MYZ6	Q9myz6 trichosurus
50	9	10.5	113	6	Q9N1S5	Q9n1s5 capreolus c
51	9	10.5	123	6	Q8MJI5	Q8mji5 sus scrofa
52	9	10.5	129	13	Q9PU30	Q9pu30 oreochromis
53	9	10.5	135	13	Q9PTB0	Q9ptb0 gallus gall
54	9	10.5	141	6	Q862G1	Q862g1 bos taurus
55	9	10.5	149	6	Q9MYX4	Q9myx4 bos indicus
56	9	10.5	154	11	Q63265	Q63265 rattus norv
57	9	10.5	167	13	Q9DET4	Q9det4 myoxocephal
58	9	10.5	177	13	Q7ZZT6	Q7zzt6 gallus gall
59	9	10.5	187	13	O57687	O57687 taenopygia
60	9	10.5	187	13	P79890	P79890 gallus gall
61	9	10.5	210	13	Q91443	Q91443 squalus aca
62	9	10.5	215	13	O73721	O73721 tilapia sp.
63	9	10.5	215	13	O42429	O42429 lates calca
64	9	10.5	215	13	Q800Y4	Q800y4 siganus gut
65	9	10.5	215	13	Q800E6	Q800e6 paralichthy
66	8	9.3	94	4	O14767	O14767 homo sapien
67	8	9.3	98	10	Q7XP25	Q7xp25 oryza sativ
68	8	9.3	126	13	Q9YGY5	Q9ygy5 oreochromis
69	8	9.3	182	13	O73720	O73720 oreochromis
70	8	9.3	182	13	O42289	O42289 oreochromis
71	8	9.3	182	13	P79824	P79824 oreochromis
72	8	9.3	471	10	Q9ZWB3	Q9zwb3 arabidopsis
73	8	9.3	769	10	O23275	O23275 arabidopsis
74	8	9.3	772	10	Q8VXX0	Q8vxx0 arabidopsis
75	8	9.3	772	10	Q8RW92	Q8rw92 arabidopsis
76	8	9.3	1278	4	Q9UPP5	Q9upp5 homo sapien
77	7	8.1	82	5	Q17193	Q17193 bombyx mori
78	7	8.1	132	10	Q8SAA4	Q8saa4 arabidopsis
79	7	8.1	146	8	Q9MFF3	Q9mff3 beta vulgar
80	7	8.1	146	10	Q93VM8	Q93vm8 arabidopsis
81	7	8.1	151	10	Q8LAQ7	Q8laq7 arabidopsis
82	7	8.1	151	10	Q9STX3	Q9stx3 arabidopsis
83	7	8.1	152	12	O55760	O55760 chilo iride
84	7	8.1	191	10	Q7XDR5	Q7xdr5 oryza sativ
85	7	8.1	196	11	Q8C918	Q8c918 mus musculu
86	7	8.1	197	13	Q9PUD0	Q9pud0 brachydanio
87	7	8.1	197	13	Q8UUI9	Q8uui9 brachydanio
88	7	8.1	224	10	Q9MA48	Q9ma48 arabidopsis
89	7	8.1	226	16	Q9RSH7	Q9rsh7 deinococcus

90	7	8.1	248	10	Q9FRV9	Q9frv9 calystegia
91	7	8.1	273	16	O06162	O06162 mycobacteri
92	7	8.1	273	16	Q7TYF9	Q7tyf9 mycobacteri
93	7	8.1	281	10	Q9AT20	Q9at20 lens culina
94	7	8.1	290	10	Q9AT24	Q9at24 pisum sativ
95	7	8.1	293	10	Q9AT19	Q9at19 lens culina
96	7	8.1	293	10	Q9AT18	Q9at18 lens culina
97	7	8.1	293	10	Q84NF8	Q84nf8 lens nigric
98	7	8.1	295	10	Q8LKH9	Q8lkh9 pisum fulvu
99	7	8.1	295	10	Q8LKI0	Q8lki0 pisum sativ
100	7	8.1	295	10	Q9AT22	Q9at22 lathyrus sa

ALIGNMENTS

```
RESULT 1
Q9N1S6
ID   Q9N1S6      PRELIMINARY;      PRT;    66 AA.
AC   Q9N1S6;
DT   01-OCT-2000 (TrEMBLrel. 15, Created)
DT   01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
DT   01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DE   Insulin-like growth factor I (Fragment).
GN   IGF-I.
OS   Capreolus capreolus (Roe deer).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Cervoidea;
OC   Cervidae; Odocoileinae; Capreolus.
OX   NCBI_TaxID=9858;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Testis;
RX   MEDLINE=20532861; PubMed=11078967;
RA   Wagener A., Blottner S., Goritz F., Fickel J.;
RT   "Detection of growth factors in the testis of roe deer (Capreolus
RT   capreolus).";
RL   Anim. Reprod. Sci. 64:65-75(2000).
CC   -!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
CC   -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
DR   EMBL; AF152588; AAF73227.1; -.
DR   HSSP; P01343; 2GF1.
DR   GO; GO:0005576; C:extracellular; IEA.
DR   GO; GO:0005179; F:hormone activity; IEA.
DR   GO; GO:0007582; P:physiological processes; IEA.
DR   InterPro; IPR004825; Ins/IGF/relax.
DR   Pfam; PF00049; Insulin; 1.
DR   PRINTS; PR00276; INSULINA.
DR   SMART; SM00078; IlGF; 1.
DR   PROSITE; PS00262; INSULIN; 1.
FT   NON_TER       1      1
FT   NON_TER      66     66
SQ   SEQUENCE   66 AA;  7422 MW;  4BD5ACFBADF73E51 CRC64;

  Query Match             60.5%;  Score 52;  DB 6;  Length 66;
  Best Local Similarity   100.0%;  Pred. No. 2.3e-48;
  Matches   52;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAKAARSVRAQR 52
              ||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         15 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAKAARSVRAQR 66


RESULT 2
Q9NP10
ID   Q9NP10      PRELIMINARY;      PRT;   130 AA.
AC   Q9NP10;
DT   01-OCT-2000 (TrEMBLrel. 15, Created)
DT   01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
DT   01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DE   IGF1 protein precursor.
GN   IGF1.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=88065102; PubMed=3683205;
RA   Rall L.B., Scott J., Bell G.I.;
RT   "Human insulin-like growth factor I and II messenger RNA: isolation of
RT   complementary DNA and analysis of expression.";
RL   Meth. Enzymol. 146:239-248(1987).
CC   -!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
CC   -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
DR   EMBL; M29644; AAA52543.1; -.
DR   HSSP; P01343; 2GF1.
DR   GO; GO:0005576; C:extracellular; IEA.
DR   GO; GO:0005179; F:hormone activity; IEA.
DR   GO; GO:0007582; P:physiological processes; IEA.
DR   InterPro; IPR004825; Ins/IGF/relax.
DR   Pfam; PF00049; Insulin; 1.
DR   PRINTS; PR00277; INSULINB.
DR   SMART; SM00078; IlGF; 1.
DR   PROSITE; PS00262; INSULIN; 1.
KW   Signal.
FT   SIGNAL        1     25       POTENTIAL.
FT   CHAIN        26     95       POTENTIAL.
SQ   SEQUENCE   130 AA;  14406 MW;  970FBAAECFA0352D CRC64;

  Query Match             50.0%;  Score 43;  DB 4;  Length 130;
  Best Local Similarity   100.0%;  Pred. No. 2.3e-38;
  Matches   43;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
              |||||||||||||||||||||||||||||||||||||||||||
Db         51 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 93


RESULT 3
Q9N1C1
ID   Q9N1C1      PRELIMINARY;      PRT;   133 AA.
AC   Q9N1C1;
DT   01-OCT-2000 (TrEMBLrel. 15, Created)
DT   01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
DT   01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DE   Insulin-like growth factor I (Fragment).
GN   IGF1.
OS   Bos taurus (Bovine).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
OC   Bovidae; Bovinae; Bos.
OX   NCBI_TaxID=9913;
RN   [1]
RP   SEQUENCE FROM N.A.
RA   Lien S., Karlsen A., Klemetsdal G., Vage D.I., Olsaker I.,
RA   Klungland H., Aasland M., Heringstad B., Ruane J., Gomez-Raya L.;
RT   "A primary screen of the bovine genome for quantitative trait loci
RT   affecting twinning rate.";
RL   Submitted (DEC-1999) to the EMBL/GenBank/DDBJ databases.
CC   -!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
CC   -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
DR   EMBL; AF210387; AAF72409.1; -.
DR   EMBL; AF210385; AAF72409.1; JOINED.
DR   EMBL; AF210386; AAF72409.1; JOINED.
DR   HSSP; P01343; 2GF1.
DR   GO; GO:0005576; C:extracellular; IEA.
DR   GO; GO:0005179; F:hormone activity; IEA.
DR   GO; GO:0007582; P:physiological processes; IEA.
DR   InterPro; IPR004825; Ins/IGF/relax.
DR   Pfam; PF00049; Insulin; 1.
DR   PRINTS; PR00277; INSULINB.
DR   SMART; SM00078; IlGF; 1.
DR   PROSITE; PS00262; INSULIN; 1.
FT   NON_TER       1      1
SQ   SEQUENCE   133 AA;  14674 MW;  A6991DBCB75C103B CRC64;
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  Query Match             50.0%;  Score 43;  DB 6;  Length 133;
  Best Local Similarity   100.0%;  Pred. No. 2.3e-38;
  Matches   43;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
              |||||||||||||||||||||||||||||||||||||||||||
Db         54 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 96


RESULT 4
Q14620
ID   Q14620      PRELIMINARY;      PRT;   137 AA.
AC   Q14620;
DT   01-NOV-1996 (TrEMBLrel. 01, Created)
DT   01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
DT   01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DE   Insulin-like growth factor I precursor.
GN   IGF1.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=91187000; PubMed=2082190;
RA   Tobin G., Yee D., Brunner N., Rotwein P.;
RT   "A novel human insulin-like growth factor I messenger RNA is expressed
RT   in normal and tumor cells.";
RL   Mol. Endocrinol. 4:1914-1920(1990).
CC   -!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
CC   -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
DR   EMBL; M37484; AAA52789.1; -.
DR   PIR; A36552; A36552.
DR   HSSP; P01343; 2GF1.
DR   GO; GO:0005576; C:extracellular; IEA.
DR   GO; GO:0005179; F:hormone activity; IEA.
DR   GO; GO:0007582; P:physiological processes; IEA.
DR   InterPro; IPR004825; Ins/IGF/relax.
DR   Pfam; PF00049; Insulin; 1.
DR   PRINTS; PR00277; INSULINB.
DR   SMART; SM00078; IlGF; 1.
DR   PROSITE; PS00262; INSULIN; 1.
KW   Signal.
FT   SIGNAL        1     32       POTENTIAL.
FT   CHAIN        33    137       INSULIN-LIKE GROWTH FACTOR I.
SQ   SEQUENCE   137 AA;  15177 MW;  BFCC0D11E32AB75D CRC64;

  Query Match             50.0%;  Score 43;  DB 4;  Length 137;
  Best Local Similarity   100.0%;  Pred. No. 2.4e-38;
  Matches   43;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
              |||||||||||||||||||||||||||||||||||||||||||
Db         58 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 100


RESULT 5
Q13429
ID   Q13429      PRELIMINARY;      PRT;   139 AA.
AC   Q13429;
DT   01-NOV-1996 (TrEMBLrel. 01, Created)
DT   01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
DT   01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DE   Insulin-like growth factor-I (Fragment).
GN   IGF-I.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Liver;
RX   MEDLINE=95237119; PubMed=7720641;
RA   Chew S.L., Lavender P., Clark A.J., Ross R.J.;
RT   "An alternatively spliced human insulin-like growth factor-I
RT   transcript with hepatic tissue expression that diverts away from the
RT   mitogenic IBE1 peptide.";
RL   Endocrinology 136:1939-1944(1995).
CC   -!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
CC   -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
DR   EMBL; U40870; AAA96152.1; -.
DR   HSSP; P01343; 2GF1.
DR   GO; GO:0005576; C:extracellular; IEA.
DR   GO; GO:0005179; F:hormone activity; IEA.
DR   GO; GO:0007582; P:physiological processes; IEA.
DR   InterPro; IPR004825; Ins/IGF/relax.
DR   Pfam; PF00049; Insulin; 1.
DR   PRINTS; PR00277; INSULINB.
DR   SMART; SM00078; IlGF; 1.
DR   PROSITE; PS00262; INSULIN; 1.
FT   NON_TER       1      1
SQ   SEQUENCE   139 AA;  15611 MW;  A62271872CA29DE4 CRC64;

  Query Match             50.0%;  Score 43;  DB 4;  Length 139;
  Best Local Similarity   100.0%;  Pred. No. 2.4e-38;
  Matches   43;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
              |||||||||||||||||||||||||||||||||||||||||||
Db         55 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 97


RESULT 6
P79167
ID   P79167      PRELIMINARY;      PRT;   139 AA.
AC   P79167;
DT   01-MAY-1997 (TrEMBLrel. 03, Created)
DT   01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
DT   01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DE   Insulin-like growth factor IB precursor (IGF-IB) (Somatomedin C)
DE   (Fragments).
GN   IGF1.
OS   Equus caballus (Horse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Perissodactyla; Equidae; Equus.
OX   NCBI_TaxID=9796;
RN   [1]
RP   SEQUENCE OF 1-122 FROM N.A.
RC   TISSUE=Liver;
RX   MEDLINE=97013467; PubMed=8860303;
RA   Otte K., Rozell B., Gessbo A., Engstrom W.;
RT   "Cloning and sequencing of an equine insulin-like growth factor I cDNA
RT   and its expression in fetal and adult tissues.";
RL   Gen. Comp. Endocrinol. 102:11-15(1996).
RN   [2]
RP   SEQUENCE OF 123-139 FROM N.A.
RA   Nixon A.J., Toland B.D., Sandell L.J.;
RL   Submitted (JAN-1997) to the EMBL/GenBank/DDBJ databases.
CC   -!- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA,
CC       ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A
CC       MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
CC   -!- SUBCELLULAR LOCATION: SECRETED.
CC   -!- ALTERNATIVE PRODUCTS:
CC       Event=Alternative splicing; Named isoforms=2;
CC       Name=IGF-IB;
CC         IsoId=P79167-1; Sequence=Displayed;
CC       Name=IGF-IA;
CC         IsoId=P51458-1; Sequence=External;
CC   -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
DR   EMBL; U28070; AAA68952.1; -.
DR   EMBL; U85271; AAB47484.1; -.
DR   HSSP; P01343; 2GF1.
DR   GO; GO:0005576; C:extracellular; IEA.
DR   GO; GO:0008083; F:growth factor activity; IEA.
DR   GO; GO:0005179; F:hormone activity; IEA.
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DR   GO; GO:0007582; P:physiological processes; IEA.
DR   InterPro; IPR004825; Ins/IGF/relax.
DR   PRINTS; PR00277; INSULINB.
DR   SMART; SM00078; IlGF; 1.
DR   PROSITE; PS00262; INSULIN; 1.
KW   Insulin family; Growth factor; Signal; Alternative splicing.
FT   SIGNAL        1      ?
FT   PROPEP        ?     48       BY SIMILARITY.
FT   CHAIN        49    118       INSULIN-LIKE GROWTH FACTOR IB.
FT   DOMAIN       49     77       B.
FT   DOMAIN       78     89       C.
FT   DOMAIN       90    110       A.
FT   DOMAIN      111    118       D.
FT   PROPEP      119   >139       E PEPTIDE.
FT   NON_CONS    122    123
FT   DISULFID     54     96       BY SIMILARITY.
FT   DISULFID     66    109       BY SIMILARITY.
FT   DISULFID     95    100       BY SIMILARITY.
FT   NON_TER     139    139
SQ   SEQUENCE   139 AA;  15612 MW;  CDC0E8F19C261A2C CRC64;

  Query Match             50.0%;  Score 43;  DB 6;  Length 139;
  Best Local Similarity   100.0%;  Pred. No. 2.4e-38;
  Matches   43;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
              |||||||||||||||||||||||||||||||||||||||||||
Db         74 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 116


RESULT 7
Q28236
ID   Q28236      PRELIMINARY;      PRT;    57 AA.
AC   Q28236;
DT   01-NOV-1996 (TrEMBLrel. 01, Created)
DT   01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
DT   01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DE   Insulin-like growth factor I (IGF-I) (Somatomedin C) (Fragment).
GN   IGF1 OR IGF-I.
OS   Cervus elaphus (Red deer).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Cervoidea;
OC   Cervidae; Cervinae; Cervus.
OX   NCBI_TaxID=9860;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=ANTLER;
RX   MEDLINE=98233260; PubMed=9571767;
RA   Francis S.M., Suttie J.M.;
RT   "Detection of growth factors and proto-oncogene mRNA in the growing
RT   tip of red deer (Cervus elaphus) antler using reverse-transcriptase
RT   polymerase chain reaction (RT-PCR).";
RL   J. Exp. Zool. 281:36-42(1998).
CC   -!- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA,
CC       ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A
CC       MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
CC   -!- SUBCELLULAR LOCATION: SECRETED.
CC   -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
DR   EMBL; U62106; AAB05252.1; -.
DR   HSSP; P01343; 2GF1.
DR   GO; GO:0005576; C:extracellular; IEA.
DR   GO; GO:0008083; F:growth factor activity; IEA.
DR   GO; GO:0005179; F:hormone activity; IEA.
DR   GO; GO:0007582; P:physiological processes; IEA.
DR   InterPro; IPR004825; Ins/IGF/relax.
DR   Pfam; PF00049; Insulin; 1.
DR   PRINTS; PR00276; INSULINA.
DR   SMART; SM00078; IlGF; 1.
DR   PROSITE; PS00262; INSULIN; 1.
KW   Insulin family; Growth factor.
FT   NON_TER       1      1
FT   CHAIN        <1     51       INSULIN-LIKE GROWTH FACTOR I.
FT   DOMAIN       <1     10       B.
FT   DOMAIN       11     22       C.
FT   DOMAIN       23     43       A.
FT   DOMAIN       44     51       D.
FT   PROPEP       52    >57       E PEPTIDE.
FT   DISULFID     28     33       BY SIMILARITY.
FT   NON_TER      57     57
SQ   SEQUENCE   57 AA;  6462 MW;  3DE0C44FBAED5932 CRC64;

  Query Match             47.7%;  Score 41;  DB 6;  Length 57;
  Best Local Similarity   100.0%;  Pred. No. 1.6e-36;
  Matches   41;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKP 41
              |||||||||||||||||||||||||||||||||||||||||
Db          7 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKP 47


RESULT 8
O02807
ID   O02807      PRELIMINARY;      PRT;    69 AA.
AC   O02807;
DT   01-JUL-1997 (TrEMBLrel. 04, Created)
DT   01-JUL-1997 (TrEMBLrel. 04, Last sequence update)
DT   01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DE   Pro-insulin like growth factor IA (IGFIA) (Fragment).
OS   Bubalus bubalis (Domestic water buffalo).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
OC   Bovidae; Bovinae; Bubalus.
OX   NCBI_TaxID=89462;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Lung;
RA   Daliri M., Appa Rao K.B.C., Kaur G., Garg S., Patil S., Totey S.M.;
RT   "The expression of growth factor ligand and receptor genes in
RT   preimplantation stage buffalo embryos and oviductal epithelial
RT   cells.";
RL   Submitted (JAN-1997) to the EMBL/GenBank/DDBJ databases.
CC   -!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
CC   -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
DR   EMBL; Y10691; CAA71694.1; -.
DR   HSSP; P01343; 2GF1.
DR   GO; GO:0005576; C:extracellular; IEA.
DR   GO; GO:0005179; F:hormone activity; IEA.
DR   GO; GO:0007582; P:physiological processes; IEA.
DR   InterPro; IPR004825; Ins/IGF/relax.
DR   Pfam; PF00049; Insulin; 1.
DR   PRINTS; PR00276; INSULINA.
DR   SMART; SM00078; IlGF; 1.
DR   PROSITE; PS00262; INSULIN; 1.
FT   NON_TER       1      1
FT   NON_TER      69     69
SQ   SEQUENCE   69 AA;  7501 MW;  ACFE4DF0AF49B6C6 CRC64;

  Query Match             36.0%;  Score 31;  DB 6;  Length 69;
  Best Local Similarity   100.0%;  Pred. No. 1.2e-25;
  Matches   31;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         11 RRAPQTGIVDECCFRSCDLRRLEMYCAPLKP 41
              |||||||||||||||||||||||||||||||
Db         35 RRAPQTGIVDECCFRSCDLRRLEMYCAPLKP 65


RESULT 9
P97899
ID   P97899      PRELIMINARY;      PRT;   127 AA.
AC   P97899;
DT   01-MAY-1997 (TrEMBLrel. 03, Created)
DT   01-MAY-1997 (TrEMBLrel. 03, Last sequence update)
DT   01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DE   Insulin-like growth factor I.
OS   Rattus sp.
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
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OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
OX   NCBI_TaxID=10118;
RN   [1]
RP   PARTIAL SEQUENCE FROM N.A.
RX   MEDLINE=87222423; PubMed=3034909;
RA   Shimatsu A., Rotwein P.;
RT   "Mosaic evolution of the insulin-like growth factors.";
RL   J. Biol. Chem. 262:7894-7900(1987).
RN   [2]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=91103966; PubMed=1368571;
RA   Kato H., Okoshi A., Miura Y., Noguchi T.;
RT   "A new cDNA clone relating to larger molecular species of rat insulin-
RT   like growth factor-I mRNA.";
RL   Agric. Biol. Chem. 54:1599-1601(1990).
CC   -!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
CC   -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
DR   EMBL; D00698; BAA00604.1; -.
DR   HSSP; P01343; 2GF1.
DR   GO; GO:0005576; C:extracellular; IEA.
DR   GO; GO:0005179; F:hormone activity; IEA.
DR   GO; GO:0007582; P:physiological processes; IEA.
DR   InterPro; IPR004825; Ins/IGF/relax.
DR   Pfam; PF00049; Insulin; 1.
DR   PRINTS; PR00277; INSULINB.
DR   SMART; SM00078; IlGF; 1.
DR   PROSITE; PS00262; INSULIN; 1.
FT   CHAIN        23      92       POTENTIAL.
SQ   SEQUENCE   127 AA;  14106 MW;  104E126BCFCA5CB7 CRC64;

  Query Match             36.0%;  Score 31;  DB 11;  Length 127;
  Best Local Similarity   100.0%;  Pred. No. 2.1e-25;
  Matches   31;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         11 RRAPQTGIVDECCFRSCDLRRLEMYCAPLKP 41
              |||||||||||||||||||||||||||||||
Db         58 RRAPQTGIVDECCFRSCDLRRLEMYCAPLKP 88


RESULT 10
Q8C4U6
ID   Q8C4U6      PRELIMINARY;      PRT;   153 AA.
AC   Q8C4U6;
DT   01-MAR-2003 (TrEMBLrel. 23, Created)
DT   01-MAR-2003 (TrEMBLrel. 23, Last sequence update)
DT   01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
DE   Unknown EST.
GN   C730016P09RIK.
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=C57BL/6J; TISSUE=Cerebellum;
RX   MEDLINE=22354683; PubMed=12466851;
RA   The FANTOM Consortium,
RA   the RIKEN Genome Exploration Research Group Phase I & II Team;
RT   "Analysis of the mouse transcriptome based on functional annotation of
RT   60,770 full-length cDNAs.";
RL   Nature 420:563-573(2002).
DR   EMBL; AK081019; BAC38117.1; -.
DR   MGD; MGI:2444166; C730016P09Rik.
DR   GO; GO:0005576; C:extracellular; IEA.
DR   GO; GO:0005179; F:hormone activity; IEA.
DR   GO; GO:0007582; P:physiological processes; IEA.
DR   InterPro; IPR004825; Ins/IGF/relax.
DR   Pfam; PF00049; Insulin; 1.
DR   PRINTS; PR00277; INSULINB.
DR   SMART; SM00078; IlGF; 1.
DR   PROSITE; PS00262; INSULIN; 1.
SQ   SEQUENCE   153 AA;  17093 MW;  967596AEAC0CA387 CRC64;

  Query Match             36.0%;  Score 31;  DB 11;  Length 153;
  Best Local Similarity   100.0%;  Pred. No. 2.5e-25;
  Matches   31;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         11 RRAPQTGIVDECCFRSCDLRRLEMYCAPLKP 41
              |||||||||||||||||||||||||||||||
Db         84 RRAPQTGIVDECCFRSCDLRRLEMYCAPLKP 114


RESULT 11
Q8CAR0
ID   Q8CAR0      PRELIMINARY;      PRT;   165 AA.
AC   Q8CAR0;
DT   01-MAR-2003 (TrEMBLrel. 23, Created)
DT   01-MAR-2003 (TrEMBLrel. 23, Last sequence update)
DT   01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
DE   Unknown EST.
GN   C730016P09RIK.
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=C57BL/6J; TISSUE=Thymus;
RX   MEDLINE=22354683; PubMed=12466851;
RA   The FANTOM Consortium,
RA   the RIKEN Genome Exploration Research Group Phase I & II Team;
RT   "Analysis of the mouse transcriptome based on functional annotation of
RT   60,770 full-length cDNAs.";
RL   Nature 420:563-573(2002).
DR   EMBL; AK038119; BAC29934.1; -.
DR   MGD; MGI:2444166; C730016P09Rik.
DR   GO; GO:0005576; C:extracellular; IEA.
DR   GO; GO:0005179; F:hormone activity; IEA.
DR   GO; GO:0007582; P:physiological processes; IEA.
DR   InterPro; IPR004825; Ins/IGF/relax.
DR   Pfam; PF00049; Insulin; 1.
DR   PRINTS; PR00277; INSULINB.
DR   SMART; SM00078; IlGF; 1.
DR   PROSITE; PS00262; INSULIN; 1.
SQ   SEQUENCE   165 AA;  18473 MW;  2CE0D3DA981C93F8 CRC64;

  Query Match             36.0%;  Score 31;  DB 11;  Length 165;
  Best Local Similarity   100.0%;  Pred. No. 2.6e-25;
  Matches   31;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         11 RRAPQTGIVDECCFRSCDLRRLEMYCAPLKP 41
              |||||||||||||||||||||||||||||||
Db         68 RRAPQTGIVDECCFRSCDLRRLEMYCAPLKP 98


RESULT 12
Q27962
ID   Q27962      PRELIMINARY;      PRT;    50 AA.
AC   Q27962;
DT   01-NOV-1996 (TrEMBLrel. 01, Created)
DT   01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
DT   01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DE   Insulin-like growth factor IB (IGF-IB) (Somatomedin C) (Fragment).
GN   IGF1.
OS   Bos taurus (Bovine).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
OC   Bovidae; Bovinae; Bos.
OX   NCBI_TaxID=9913;
RN   [1]
RP   SEQUENCE FROM N.A.
RA   Kirkpatrick B.W., Hart G.L.;
RL   Submitted (SEP-1993) to the EMBL/GenBank/DDBJ databases.
CC   -!- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA,
CC       ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A
CC       MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
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CC   -!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
CC   -!- ALTERNATIVE PRODUCTS:
CC       Event=Alternative splicing; Named isoforms=2;
CC       Name=IGF-IB;
CC         IsoId=Q27962-1; Sequence=Displayed;
CC       Name=IGF-IA;
CC         IsoId=P07455-1; Sequence=External;
CC   -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
DR   EMBL; U01338; AAA03497.1; -.
DR   GO; GO:0008083; F:growth factor activity; IEA.
DR   InterPro; IPR004825; Ins/IGF/relax.
DR   PROSITE; PS00262; INSULIN; PARTIAL.
KW   Insulin family; Growth factor; Alternative splicing.
FT   NON_TER       1      1
SQ   SEQUENCE   50 AA;  5387 MW;  4E3E54507D829E65 CRC64;

  Query Match             20.9%;  Score 18;  DB 6;  Length 50;
  Best Local Similarity   100.0%;  Pred. No. 1e-11;
  Matches   18;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         62 YQPPSTNKKMKSQRRRKG 79
              ||||||||||||||||||
Db         21 YQPPSTNKKMKSQRRRKG 38


RESULT 13
Q7T107
ID   Q7T107      PRELIMINARY;      PRT;   104 AA.
AC   Q7T107;
DT   01-OCT-2003 (TrEMBLrel. 25, Created)
DT   01-OCT-2003 (TrEMBLrel. 25, Last sequence update)
DT   01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
DE   Insulin-like growth factor 1 (Fragment).
GN   IGF1.
OS   Dicentrarchus labrax (European sea bass).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
OC   Acanthomorpha; Acanthopterygii; Percomorpha; Perciformes; Percoidei;
OC   Moronidae; Dicentrarchus.
OX   NCBI_TaxID=13489;
RN   [1]
RP   SEQUENCE FROM N.A.
RA   Gisbert E., Villeneuve L.A.N., Cahu C., Zambonino-Infante J.L.;
RT   "Effect of vitamin A level during the development of sea bass
RT   (Dicentrarchus labrax) larvae.";
RL   Submitted (JUL-2003) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AJ579342; CAE18111.1; -.
FT   NON_TER       1      1
FT   NON_TER     104    104
SQ   SEQUENCE   104 AA;  11339 MW;  5CC569A80B8F6FF2 CRC64;

  Query Match             17.4%;  Score 15;  DB 13;  Length 104;
  Best Local Similarity   100.0%;  Pred. No. 3.5e-08;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         43 KAARSVRAQRHTDMP 57
              |||||||||||||||
Db         86 KAARSVRAQRHTDMP 100


RESULT 14
Q800N0
ID   Q800N0      PRELIMINARY;      PRT;   108 AA.
AC   Q800N0;
DT   01-JUN-2003 (TrEMBLrel. 24, Created)
DT   01-JUN-2003 (TrEMBLrel. 24, Last sequence update)
DT   01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
DE   Insulin-like growth factor I (Fragment).
OS   Morone chrysops x Morone saxatilis (White bass x Striped bass).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
OC   Acanthomorpha; Acanthopterygii; Percomorpha; Perciformes; Percoidei;
OC   Moronidae; Morone.
OX   NCBI_TaxID=45352;
RN   [1]
RP   SEQUENCE FROM N.A.
RA   Fruchtman S., Hawkins M.B., Borski R.J.;
RT   "Cloning of IGF-I and the type I IGF receptor cDNAs from temperate
RT   bass species.";
RL   Submitted (JUL-2001) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AF402669; AAO73854.1; -.
DR   GO; GO:0005576; C:extracellular; IEA.
DR   GO; GO:0005179; F:hormone activity; IEA.
DR   GO; GO:0007582; P:physiological processes; IEA.
DR   InterPro; IPR004825; Ins/IGF/relax.
DR   InterPro; IPR003234; Mollusc_ins.
DR   Pfam; PF00049; Insulin; 1.
DR   PRINTS; PR00277; INSULINB.
DR   ProDom; PD015667; Mollusc_ins; 1.
DR   SMART; SM00078; IlGF; 1.
DR   PROSITE; PS00262; INSULIN; 1.
FT   NON_TER       1      1
FT   NON_TER     108    108
SQ   SEQUENCE   108 AA;  11768 MW;  7B9466A89CC569A8 CRC64;

  Query Match             17.4%;  Score 15;  DB 13;  Length 108;
  Best Local Similarity   100.0%;  Pred. No. 3.6e-08;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         43 KAARSVRAQRHTDMP 57
              |||||||||||||||
Db         86 KAARSVRAQRHTDMP 100


RESULT 15
Q800M9
ID   Q800M9      PRELIMINARY;      PRT;   108 AA.
AC   Q800M9;
DT   01-JUN-2003 (TrEMBLrel. 24, Created)
DT   01-JUN-2003 (TrEMBLrel. 24, Last sequence update)
DT   01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
DE   Insulin-like growth factor I (Fragment).
OS   Morone saxatilis (Striped bass).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
OC   Acanthomorpha; Acanthopterygii; Percomorpha; Perciformes; Percoidei;
OC   Moronidae; Morone.
OX   NCBI_TaxID=34816;
RN   [1]
RP   SEQUENCE FROM N.A.
RA   Fruchtman S., Hawkins M.B., Borski R.J.;
RT   "Cloning of IGF-I and the type I IGF receptor cDNAs from temperate
RT   bass species.";
RL   Submitted (JUL-2001) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AF402670; AAO73855.1; -.
DR   GO; GO:0005576; C:extracellular; IEA.
DR   GO; GO:0005179; F:hormone activity; IEA.
DR   GO; GO:0007582; P:physiological processes; IEA.
DR   InterPro; IPR004825; Ins/IGF/relax.
DR   InterPro; IPR003234; Mollusc_ins.
DR   Pfam; PF00049; Insulin; 1.
DR   PRINTS; PR00277; INSULINB.
DR   ProDom; PD015667; Mollusc_ins; 1.
DR   SMART; SM00078; IlGF; 1.
DR   PROSITE; PS00262; INSULIN; 1.
FT   NON_TER       1      1
FT   NON_TER     108    108
SQ   SEQUENCE   108 AA;  11768 MW;  7B9466A89CC569A8 CRC64;

  Query Match             17.4%;  Score 15;  DB 13;  Length 108;
  Best Local Similarity   100.0%;  Pred. No. 3.6e-08;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         43 KAARSVRAQRHTDMP 57
              |||||||||||||||
Db         86 KAARSVRAQRHTDMP 100
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RESULT 16
Q800M8
ID   Q800M8      PRELIMINARY;      PRT;   108 AA.
AC   Q800M8;
DT   01-JUN-2003 (TrEMBLrel. 24, Created)
DT   01-JUN-2003 (TrEMBLrel. 24, Last sequence update)
DT   01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
DE   Insulin-like growth factor I (Fragment).
OS   Morone chrysops (White bass).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
OC   Acanthomorpha; Acanthopterygii; Percomorpha; Perciformes; Percoidei;
OC   Moronidae; Morone.
OX   NCBI_TaxID=46259;
RN   [1]
RP   SEQUENCE FROM N.A.
RA   Fruchtman S., Hawkins M.B., Borski R.J.;
RT   "Cloning of IGF-I and the type I IGF receptor cDNAs from temperate
RT   bass species.";
RL   Submitted (JUL-2001) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AF402671; AAO73856.1; -.
DR   GO; GO:0005576; C:extracellular; IEA.
DR   GO; GO:0005179; F:hormone activity; IEA.
DR   GO; GO:0007582; P:physiological processes; IEA.
DR   InterPro; IPR004825; Ins/IGF/relax.
DR   InterPro; IPR003234; Mollusc_ins.
DR   Pfam; PF00049; Insulin; 1.
DR   PRINTS; PR00277; INSULINB.
DR   ProDom; PD015667; Mollusc_ins; 1.
DR   SMART; SM00078; IlGF; 1.
DR   PROSITE; PS00262; INSULIN; 1.
FT   NON_TER       1      1
FT   NON_TER     108    108
SQ   SEQUENCE   108 AA;  11768 MW;  7B9466A89CC569A8 CRC64;

  Query Match             17.4%;  Score 15;  DB 13;  Length 108;
  Best Local Similarity   100.0%;  Pred. No. 3.6e-08;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         43 KAARSVRAQRHTDMP 57
              |||||||||||||||
Db         86 KAARSVRAQRHTDMP 100


RESULT 17
Q800M7
ID   Q800M7      PRELIMINARY;      PRT;   108 AA.
AC   Q800M7;
DT   01-JUN-2003 (TrEMBLrel. 24, Created)
DT   01-JUN-2003 (TrEMBLrel. 24, Last sequence update)
DT   01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
DE   Insulin-like growth factor I (Fragment).
OS   Morone americana (White perch).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
OC   Acanthomorpha; Acanthopterygii; Percomorpha; Perciformes; Percoidei;
OC   Moronidae; Morone.
OX   NCBI_TaxID=46260;
RN   [1]
RP   SEQUENCE FROM N.A.
RA   Fruchtman S., Hawkins M.B., Borski R.J.;
RT   "Cloning of IGF-I and the type I IGF receptor cDNAs from temperate
RT   bass species.";
RL   Submitted (JUL-2001) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AF402672; AAO73857.1; -.
DR   GO; GO:0005576; C:extracellular; IEA.
DR   GO; GO:0005179; F:hormone activity; IEA.
DR   GO; GO:0007582; P:physiological processes; IEA.
DR   InterPro; IPR004825; Ins/IGF/relax.
DR   InterPro; IPR003234; Mollusc_ins.
DR   Pfam; PF00049; Insulin; 1.
DR   PRINTS; PR00277; INSULINB.
DR   ProDom; PD015667; Mollusc_ins; 1.
DR   SMART; SM00078; IlGF; 1.
DR   PROSITE; PS00262; INSULIN; 1.
FT   NON_TER       1      1
FT   NON_TER     108    108
SQ   SEQUENCE   108 AA;  11768 MW;  7B9466A89CC569A8 CRC64;

  Query Match             17.4%;  Score 15;  DB 13;  Length 108;
  Best Local Similarity   100.0%;  Pred. No. 3.6e-08;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         43 KAARSVRAQRHTDMP 57
              |||||||||||||||
Db         86 KAARSVRAQRHTDMP 100


RESULT 18
Q91161
ID   Q91161      PRELIMINARY;      PRT;   116 AA.
AC   Q91161;
DT   01-NOV-1996 (TrEMBLrel. 01, Created)
DT   01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
DT   01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DE   Insulin-like growth factor I precursor (Fragment).
OS   Oncorhynchus kisutch (Coho salmon).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Actinopterygii; Neopterygii; Teleostei; Euteleostei;
OC   Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
OX   NCBI_TaxID=8019;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Liver;
RX   MEDLINE=90190659; PubMed=2628735;
RA   Cao Q.P, Duguay S.J, Plisetskaya E., Steiner D.F., Chan S.J.;
RT   "Nucleotide sequence and growth hormone regulated expression of salmon
RT   insulin-like growth factor I mRNA.";
RL   Mol. Endocrinol. 3:2005-2010(1989).
RN   [2]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Liver;
RX   MEDLINE=93024477; PubMed=1406698;
RA   Duguay S.J, Park L.K., Samadpour M., Dickhoff W.W.;
RT   "Nucleotide sequence and tissue distribution of three insulin-like
RT   growth factor I prohormones in salmon.";
RL   Mol. Endocrinol. 6:1202-1210(1992).
CC   -!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
CC   -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
DR   EMBL; M81911; AAB59947.1; -.
DR   HSSP; P01343; 2GF1.
DR   GO; GO:0005576; C:extracellular; IEA.
DR   GO; GO:0005179; F:hormone activity; IEA.
DR   GO; GO:0007582; P:physiological processes; IEA.
DR   InterPro; IPR004825; Ins/IGF/relax.
DR   Pfam; PF00049; Insulin; 1.
DR   PRINTS; PR00277; INSULINB.
DR   SMART; SM00078; IlGF; 1.
DR   PROSITE; PS00262; INSULIN; 1.
KW   Signal.
FT   NON_TER       1      1
FT   SIGNAL       <1     18       POTENTIAL.
FT   CHAIN        19    >88       INSULIN-LIKE GROWTH FACTOR I.
FT   NON_TER     116    116
SQ   SEQUENCE   116 AA;  12697 MW;  C5F378915179D89D CRC64;

  Query Match             17.4%;  Score 15;  DB 13;  Length 116;
  Best Local Similarity   100.0%;  Pred. No. 3.8e-08;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         43 KAARSVRAQRHTDMP 57
              |||||||||||||||
Db         86 KAARSVRAQRHTDMP 100
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RESULT 19
Q91476
ID   Q91476      PRELIMINARY;      PRT;   117 AA.
AC   Q91476;
DT   01-NOV-1996 (TrEMBLrel. 01, Created)
DT   01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
DT   01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DE   Insulin-like growth factor I precursor (Fragment).
OS   Salmo salar (Atlantic salmon).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Actinopterygii; Neopterygii; Teleostei; Euteleostei;
OC   Protacanthopterygii; Salmoniformes; Salmonidae; Salmo.
OX   NCBI_TaxID=8030;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Liver;
RX   MEDLINE=93024477; PubMed=1406698;
RA   Duguay S.J., Park L.K., Samadpour M., Dickhoff W.W.;
RT   "Nucleotide sequence and tissue distribution of three insulin-like
RT   growth factor I prohormones in salmon.";
RL   Mol. Endocrinol. 6:1202-1210(1992).
CC   -!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
CC   -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
DR   EMBL; M81904; AAA18212.1; -.
DR   HSSP; P01343; 2GF1.
DR   GO; GO:0005576; C:extracellular; IEA.
DR   GO; GO:0005179; F:hormone activity; IEA.
DR   GO; GO:0007582; P:physiological processes; IEA.
DR   InterPro; IPR004825; Ins/IGF/relax.
DR   Pfam; PF00049; Insulin; 1.
DR   PRINTS; PR00277; INSULINB.
DR   SMART; SM00078; IlGF; 1.
DR   PROSITE; PS00262; INSULIN; 1.
KW   Signal.
FT   NON_TER       1      1
FT   SIGNAL       <1     18       POTENTIAL.
FT   CHAIN        19     88       INSULIN-LIKE GROWTH FACTOR I.
SQ   SEQUENCE   117 AA;  12867 MW;  A97666EE2F526EAC CRC64;

  Query Match             17.4%;  Score 15;  DB 13;  Length 117;
  Best Local Similarity   100.0%;  Pred. No. 3.9e-08;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         43 KAARSVRAQRHTDMP 57
              |||||||||||||||
Db         86 KAARSVRAQRHTDMP 100


RESULT 20
Q91475
ID   Q91475      PRELIMINARY;      PRT;   145 AA.
AC   Q91475;
DT   01-NOV-1996 (TrEMBLrel. 01, Created)
DT   01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
DT   01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DE   Insulin-like growth factor I precursor (Fragment).
OS   Salmo salar (Atlantic salmon).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Actinopterygii; Neopterygii; Teleostei; Euteleostei;
OC   Protacanthopterygii; Salmoniformes; Salmonidae; Salmo.
OX   NCBI_TaxID=8030;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Liver;
RX   MEDLINE=93024477; PubMed=1406698;
RA   Duguay S.J., Park L.K., Samadpour M., Dickhoff W.W.;
RT   "Nucleotide sequence and tissue distribution of three insulin-like
RT   growth factor I prohormones in salmon.";
RL   Mol. Endocrinol. 6:1202-1210(1992).
CC   -!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
CC   -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
DR   EMBL; M81904; AAA18211.1; -.
DR   HSSP; P01343; 2GF1.
DR   GO; GO:0005576; C:extracellular; IEA.
DR   GO; GO:0005179; F:hormone activity; IEA.
DR   GO; GO:0007582; P:physiological processes; IEA.
DR   InterPro; IPR004825; Ins/IGF/relax.
DR   Pfam; PF00049; Insulin; 1.
DR   PRINTS; PR00277; INSULINB.
DR   SMART; SM00078; IlGF; 1.
DR   PROSITE; PS00262; INSULIN; 1.
KW   Signal.
FT   NON_TER       1      1
FT   SIGNAL       <1     18       POTENTIAL.
FT   CHAIN        19    >88       INSULIN-LIKE GROWTH FACTOR I.
FT   NON_TER     145    145
SQ   SEQUENCE   145 AA;  15885 MW;  3D94EDF477268FC4 CRC64;

  Query Match             17.4%;  Score 15;  DB 13;  Length 145;
  Best Local Similarity   100.0%;  Pred. No. 4.7e-08;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         43 KAARSVRAQRHTDMP 57
              |||||||||||||||
Db         86 KAARSVRAQRHTDMP 100


RESULT 21
Q91231
ID   Q91231      PRELIMINARY;      PRT;   149 AA.
AC   Q91231;
DT   01-NOV-1996 (TrEMBLrel. 01, Created)
DT   01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
DT   01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DE   Insulin-like growth factor-I.
GN   IGF-I.
OS   Oncorhynchus tschawytscha (Chinook salmon) (King salmon).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Actinopterygii; Neopterygii; Teleostei; Euteleostei;
OC   Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
OX   NCBI_TaxID=74940;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=Big Qualicum River; TISSUE=Liver;
RX   MEDLINE=93247592; PubMed=7683374;
RA   Wallis A.E., Devlin R.H.;
RT   "Duplicate insulin-like growth factor-I genes in salmon display
RT   alternative splicing pathways.";
RL   Mol. Endocrinol. 7:409-422(1993).
RN   [2]
RP   SEQUENCE FROM N.A.
RC   STRAIN=Big Qualicum River; TISSUE=Liver;
RA   Devlin R.H.;
RL   Submitted (OCT-1994) to the EMBL/GenBank/DDBJ databases.
CC   -!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
CC   -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
DR   EMBL; U15962; AAA67268.1; -.
DR   PIR; D54270; D54270.
DR   HSSP; P01343; 2GF1.
DR   GO; GO:0005576; C:extracellular; IEA.
DR   GO; GO:0005179; F:hormone activity; IEA.
DR   GO; GO:0007582; P:physiological processes; IEA.
DR   InterPro; IPR004825; Ins/IGF/relax.
DR   Pfam; PF00049; Insulin; 1.
DR   PRINTS; PR00277; INSULINB.
DR   SMART; SM00078; IlGF; 1.
DR   PROSITE; PS00262; INSULIN; 1.
SQ   SEQUENCE   149 AA;  16507 MW;  9AC8F072762D2AA0 CRC64;

  Query Match             17.4%;  Score 15;  DB 13;  Length 149;
  Best Local Similarity   100.0%;  Pred. No. 4.8e-08;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         43 KAARSVRAQRHTDMP 57
              |||||||||||||||
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Db        112 KAARSVRAQRHTDMP 126


RESULT 22
Q91162
ID   Q91162      PRELIMINARY;      PRT;   155 AA.
AC   Q91162;
DT   01-NOV-1996 (TrEMBLrel. 01, Created)
DT   01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
DT   01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DE   Insulin-like growth factor I precursor (Fragment).
OS   Oncorhynchus kisutch (Coho salmon).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Actinopterygii; Neopterygii; Teleostei; Euteleostei;
OC   Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
OX   NCBI_TaxID=8019;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Liver;
RX   MEDLINE=90190659; PubMed=2628735;
RA   Cao Q.P, Duguay S.J, Plisetskaya E., Steiner D.F., Chan S.J.;
RT   "Nucleotide sequence and growth hormone regulated expression of salmon
RT   insulin-like growth factor I mRNA.";
RL   Mol. Endocrinol. 3:2005-2010(1989).
RN   [2]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Liver;
RX   MEDLINE=93024477; PubMed=1406698;
RA   Duguay S.J, Park L.K., Samadpour M., Dickhoff W.W.;
RT   "Nucleotide sequence and tissue distribution of three insulin-like
RT   growth factor I prohormones in salmon.";
RL   Mol. Endocrinol. 6:1202-1210(1992).
CC   -!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
CC   -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
DR   EMBL; M81913; AAA49413.1; -.
DR   PIR; C44012; C44012.
DR   HSSP; P01343; 2GF1.
DR   GO; GO:0005576; C:extracellular; IEA.
DR   GO; GO:0005179; F:hormone activity; IEA.
DR   GO; GO:0007582; P:physiological processes; IEA.
DR   InterPro; IPR004825; Ins/IGF/relax.
DR   Pfam; PF00049; Insulin; 1.
DR   PRINTS; PR00277; INSULINB.
DR   SMART; SM00078; IlGF; 1.
DR   PROSITE; PS00262; INSULIN; 1.
KW   Signal.
FT   NON_TER       1      1
FT   SIGNAL       <1     18       POTENTIAL.
FT   CHAIN        19    >88       INSULIN-LIKE GROWTH FACTOR I.
FT   CONFLICT     73     73       R -> X (IN REF. 1).
FT   NON_TER     155    155
SQ   SEQUENCE   155 AA;  16968 MW;  022FD3CA39CA3160 CRC64;

  Query Match             17.4%;  Score 15;  DB 13;  Length 155;
  Best Local Similarity   100.0%;  Pred. No. 4.9e-08;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         43 KAARSVRAQRHTDMP 57
              |||||||||||||||
Db         86 KAARSVRAQRHTDMP 100


RESULT 23
O93607
ID   O93607      PRELIMINARY;      PRT;   159 AA.
AC   O93607;
DT   01-NOV-1998 (TrEMBLrel. 08, Created)
DT   01-NOV-1998 (TrEMBLrel. 08, Last sequence update)
DT   01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DE   Preproinsulin-like growth factor Ia.
GN   IGF-I.
OS   Paralichthys olivaceus (Flounder).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
OC   Acanthomorpha; Acanthopterygii; Percomorpha; Pleuronectiformes;
OC   Pleuronectoidei; Paralichthyidae; Paralichthys.
OX   NCBI_TaxID=8255;
RN   [1]
RP   SEQUENCE FROM N.A.
RA   Kim D.S.;
RT   "Expression of IGF-Ib cDNA clone isolated from Paralichthys olivaceus
RT   in'mammalian CHO cell line using green fluorescence protein (GFP)
RT   tagging: secretory production of big IGFIb-GFP fusion proteins from
RT   stable transfected CHO cell culture.";
RL   Submitted (AUG-1998) to the EMBL/GenBank/DDBJ databases.
CC   -!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
CC   -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
DR   EMBL; AJ010602; CAA09267.1; -.
DR   HSSP; P01343; 2GF1.
DR   GO; GO:0005576; C:extracellular; IEA.
DR   GO; GO:0005179; F:hormone activity; IEA.
DR   GO; GO:0007582; P:physiological processes; IEA.
DR   InterPro; IPR004825; Ins/IGF/relax.
DR   Pfam; PF00049; Insulin; 1.
DR   PRINTS; PR00277; INSULINB.
DR   SMART; SM00078; IlGF; 1.
DR   PROSITE; PS00262; INSULIN; 1.
SQ   SEQUENCE   159 AA;  17541 MW;  8B61DC89831E0865 CRC64;

  Query Match             17.4%;  Score 15;  DB 13;  Length 159;
  Best Local Similarity   100.0%;  Pred. No. 5.1e-08;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         43 KAARSVRAQRHTDMP 57
              |||||||||||||||
Db        110 KAARSVRAQRHTDMP 124


RESULT 24
Q91230
ID   Q91230      PRELIMINARY;      PRT;   161 AA.
AC   Q91230;
DT   01-NOV-1996 (TrEMBLrel. 01, Created)
DT   01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
DT   01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DE   Insulin-like growth factor-I.
GN   IGF-I.
OS   Oncorhynchus tschawytscha (Chinook salmon) (King salmon).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Actinopterygii; Neopterygii; Teleostei; Euteleostei;
OC   Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
OX   NCBI_TaxID=74940;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=Big Qualicum River; TISSUE=Liver;
RX   MEDLINE=93247592; PubMed=7683374;
RA   Wallis A.E., Devlin R.H.;
RT   "Duplicate insulin-like growth factor-I genes in salmon display
RT   alternative splicing pathways.";
RL   Mol. Endocrinol. 7:409-422(1993).
RN   [2]
RP   SEQUENCE FROM N.A.
RC   STRAIN=Big Qualicum River; TISSUE=Liver;
RA   Devlin R.H.;
RL   Submitted (OCT-1994) to the EMBL/GenBank/DDBJ databases.
CC   -!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
CC   -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
DR   EMBL; U15961; AAA67267.1; -.
DR   PIR; C54270; C54270.
DR   HSSP; P01343; 2GF1.
DR   GO; GO:0005576; C:extracellular; IEA.
DR   GO; GO:0005179; F:hormone activity; IEA.
DR   GO; GO:0007582; P:physiological processes; IEA.
DR   InterPro; IPR004825; Ins/IGF/relax.
DR   Pfam; PF00049; Insulin; 1.
DR   PRINTS; PR00277; INSULINB.
```

```
DR   SMART; SM00078; IlGF; 1.
DR   PROSITE; PS00262; INSULIN; 1.
SQ   SEQUENCE   161 AA;  17763 MW;  A5A85D121377BF67 CRC64;

  Query Match             17.4%;  Score 15;  DB 13;  Length 161;
  Best Local Similarity   100.0%;  Pred. No. 5.1e-08;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         43 KAARSVRAQRHTDMP 57
              |||||||||||||||
Db        112 KAARSVRAQRHTDMP 126


RESULT 25
O57436
ID   O57436      PRELIMINARY;      PRT;   185 AA.
AC   O57436;
DT   01-JUN-1998 (TrEMBLrel. 06, Created)
DT   01-JUN-1998 (TrEMBLrel. 06, Last sequence update)
DT   01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DE   Insulin-like growth factor I.
GN   IGF-1.
OS   Paralichthys olivaceus (Flounder).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
OC   Acanthomorpha; Acanthopterygii; Percomorpha; Pleuronectiformes;
OC   Pleuronectoidei; Paralichthyidae; Paralichthys.
OX   NCBI_TaxID=8255;
RN   [1]
RP   SEQUENCE FROM N.A.
RA   Kim S.-H., Kim K.-S., Nam T.-J., Lee Y.-C.;
RT   "Molecular cloning and expression of insulin-like growth factor I cDNA
RT   from flounder liver.";
RL   Submitted (AUG-1997) to the EMBL/GenBank/DDBJ databases.
CC   -!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
CC   -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
DR   EMBL; AF016922; AAB94052.1; -.
DR   HSSP; P01343; 2GF1.
DR   GO; GO:0005576; C:extracellular; IEA.
DR   GO; GO:0005179; F:hormone activity; IEA.
DR   GO; GO:0007582; P:physiological processes; IEA.
DR   InterPro; IPR004825; Ins/IGF/relax.
DR   Pfam; PF00049; Insulin; 1.
DR   PRINTS; PR00277; INSULINB.
DR   SMART; SM00078; IlGF; 1.
DR   PROSITE; PS00262; INSULIN; 1.
SQ   SEQUENCE   185 AA;  20414 MW;  8A898369DF567BB3 CRC64;

  Query Match             17.4%;  Score 15;  DB 13;  Length 185;
  Best Local Similarity   100.0%;  Pred. No. 5.8e-08;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         43 KAARSVRAQRHTDMP 57
              |||||||||||||||
Db        110 KAARSVRAQRHTDMP 124


Search completed: March  3, 2004, 12:10:35
Job time : 39 secs
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GenCore version 5.1.6

OM protein - protein search, using sw model

Run on: March 3, 2004, 12:03:51 ; Search time 14 Seconds
(without alignments)
319.860 Million cell updates/sec

Title: US-09-852-261-6_COPY_26_111
Perfect score: 86
Sequence: 1 NKPTGYGSSSRRAPQTGIVD.....TNKKMKSQRRRKGSTFEEHK 86

Scoring table: OLIGO
Gapop 60.0 , Gapext 60.0

Searched: 141681 seqs, 52070155 residues

Word size : 0

Total number of hits satisfying chosen parameters: 141681

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Listing first 100 summaries

Database : SwissProt_42:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	86	100.0	143	1	IGF1_RABIT	Q95222 oryctolagus
2	52	60.5	81	1	IGF1_SUNMU	Q28933 suncus muri
3	43	50.0	122	1	IGF1_CANFA	P33712 canis famil
4	43	50.0	122	1	IGF1_HORSE	P51458 equus cabal
5	43	50.0	130	1	IGF1_CAVPO	P17647 cavia porce
6	43	50.0	153	1	IGF1_PIG	P16545 sus scrofa
7	43	50.0	153	1	IGFA_HUMAN	P01343 homo sapien
8	43	50.0	154	1	IGF1_BOVIN	P07455 bos taurus
9	43	50.0	195	1	IGFB_HUMAN	P05019 homo sapien
10	41	47.7	154	1	IGF1_CAPHI	P51457 capra hircu
11	40	46.5	154	1	IGF1_SHEEP	P10763 ovis aries
12	31	36.0	127	1	IGFA_MOUSE	P05017 mus musculu
13	31	36.0	133	1	IGFB_MOUSE	P05018 mus musculu
14	31	36.0	153	1	IGFA_RAT	P08025 rattus norv
15	31	36.0	181	1	IGFB_RAT	P08024 rattus norv
16	15	17.4	176	1	IGF1_ONCKI	P17085 oncorhynchu
17	15	17.4	176	1	IGF1_ONCMY	Q02815 oncorhynchu
18	14	16.3	124	1	IGF1_COTJA	P51462 coturnix co
19	14	16.3	153	1	IGF1_CHICK	P18254 gallus gall
20	14	16.3	153	1	IGF1_XENLA	P16501 xenopus lae
21	10	11.6	161	1	IGFA_CYPCA	Q90325 cyprinus ca
22	10	11.6	161	1	IGFB_CYPCA	Q90326 cyprinus ca
23	9	10.5	66	1	IGF2_CHICK	P33717 gallus gall
24	9	10.5	128	1	IGF2_CAVPO	Q08279 cavia porce
25	9	10.5	129	1	IGF2_MUSVI	P41694 mustela vis
26	9	10.5	155	1	IGF2_BOVIN	P07456 bos taurus
27	9	10.5	179	1	IGF2_SHEEP	P10764 ovis aries
28	9	10.5	180	1	IGF2_HUMAN	P01344 homo sapien
29	9	10.5	180	1	IGF2_MOUSE	P09535 mus musculu
30	9	10.5	180	1	IGF2_RAT	P01346 rattus norv
31	9	10.5	181	1	IGF2_HORSE	P51459 equus cabal
32	9	10.5	181	1	IGF2_PIG	P23695 sus scrofa
33	9	10.5	214	1	IGF2_ONCMY	Q02816 oncorhynchu
34	7	8.1	87	1	BXBA_BOMMO	Q17194 bombyx mori
35	7	8.1	88	1	BXB8_BOMMO	P26742 bombyx mori
36	7	8.1	89	1	BXA2_BOMMO	P15411 bombyx mori
37	7	8.1	89	1	BXA8_BOMMO	P26731 bombyx mori
38	7	8.1	89	1	BXB1_BOMMO	P26733 bombyx mori
39	7	8.1	89	1	BXB2_BOMMO	P26734 bombyx mori
40	7	8.1	90	1	BXB3_BOMMO	P26737 bombyx mori
41	7	8.1	90	1	BXB4_BOMMO	P26738 bombyx mori
42	7	8.1	90	1	BXB5_BOMMO	P26739 bombyx mori
43	7	8.1	90	1	BXB6_BOMMO	P26740 bombyx mori
44	7	8.1	90	1	BXB7_BOMMO	P26741 bombyx mori
45	7	8.1	90	1	BXB9_BOMMO	P26743 bombyx mori
46	7	8.1	91	1	BXC1_BOMMO	P15410 bombyx mori
47	7	8.1	92	1	BXA1_BOMMO	Q17192 bombyx mori
48	7	8.1	92	1	BXA3_BOMMO	P26726 bombyx mori
49	7	8.1	92	1	BXA4_BOMMO	P26727 bombyx mori
50	7	8.1	92	1	BXA5_BOMMO	P26728 bombyx mori
51	7	8.1	92	1	BXA6_BOMMO	P26729 bombyx mori
52	7	8.1	92	1	BXA7_BOMMO	P26730 bombyx mori
53	7	8.1	92	1	BXA9_BOMMO	P26732 bombyx mori
54	7	8.1	93	1	BXBB_BOMMO	Q17196 bombyx mori
55	7	8.1	95	1	BXC2_BOMMO	P26735 bombyx mori
56	7	8.1	207	1	RR4_PROWI	O47032 prototheca
57	7	8.1	246	1	TATB_AGRT5	Q8ueq0 agrobacteri
58	7	8.1	885	1	VGLB_HSV2S	P24994 herpes simp
59	7	8.1	1258	1	SA1_HUMAN	Q8wvm7 homo sapien
60	7	8.1	1258	1	SA1_MOUSE	Q9d3e6 mus musculu
61	6	7.0	58	1	HSP2_MURBR	P83212 murex brand
62	6	7.0	85	1	YS71_MYCTU	Q10799 mycobacteri
63	6	7.0	90	1	BXBC_BOMMO	P29519 bombyx mori
64	6	7.0	94	1	SELK_MOUSE	Q9jlj1 mus musculu
65	6	7.0	121	1	H2B_PATGR	P02284 patella gra
66	6	7.0	122	1	H2B_PLADU	P19374 platynereis
67	6	7.0	122	1	H2B_URECA	P27326 urechis cau
68	6	7.0	125	1	RS13_SYNP6	O24708 synechococc
69	6	7.0	126	1	RS13_ANASP	Q8ypk1 anabaena sp
70	6	7.0	126	1	RS13_SYNEL	Q8dml1 synechococc
71	6	7.0	129	1	UREA_SOYBN	P08298 glycine max
72	6	7.0	132	1	YBL2_STRCI	P33654 streptomyce
73	6	7.0	139	1	IGF_MYXGL	P22618 myxine glut
74	6	7.0	146	1	YCGY_ECOLI	P76012 escherichia
75	6	7.0	159	1	Y399_METKA	P58829 methanopyru
76	6	7.0	182	1	TBP_CERSY	O74045 cenarchaeum
77	6	7.0	195	1	HAM1_STAAM	Q99uv5 staphylococ
78	6	7.0	195	1	HAM1_STAAW	P58995 staphylococ
79	6	7.0	206	1	RS4_NEIMA	Q9jrd0 neisseria m
80	6	7.0	206	1	RS4_PSEAE	O52759 pseudomonas
81	6	7.0	209	1	H1A_XENLA	P06892 xenopus lae
82	6	7.0	212	1	H11_MOUSE	P43275 mus musculu
83	6	7.0	214	1	H11_HUMAN	Q02539 homo sapien
84	6	7.0	219	1	P25A_HUMAN	O94811 homo sapien
85	6	7.0	220	1	KCY_THEMA	Q9x1f6 thermotoga
86	6	7.0	222	1	KCY2_HAEIN	P43893 haemophilus
87	6	7.0	223	1	KCY_XYLFA	Q9paq6 xylella fas
88	6	7.0	223	1	KCY_XYLFT	Q87bj6 xylella fas
89	6	7.0	227	1	KCY_PASMU	P57875 pasteurella
90	6	7.0	228	1	KCY_PSEPK	Q88m04 pseudomonas
91	6	7.0	229	1	KCY_PSEAE	Q9hz70 pseudomonas
92	6	7.0	229	1	KCY_PSESM	Q885t2 pseudomonas
93	6	7.0	231	1	KCY1_HAEIN	P43892 haemophilus
94	6	7.0	236	1	TL17_ARATH	P81760 arabidopsis
95	6	7.0	238	1	Y647_HAEIN	Q57424 haemophilus
96	6	7.0	247	1	NUKC_TOBAC	P06409 nicotiana t
97	6	7.0	262	1	YF14_MYCTU	P71793 mycobacteri
98	6	7.0	271	1	TRMB_CAUCR	P58088 caulobacter
99	6	7.0	272	1	AAKC_HUMAN	O43741 homo sapien
100	6	7.0	273	1	EXB2_ARATH	Q9shy6 arabidopsis

ALIGNMENTS

RESULT 1

```
IGF1_RABIT
ID   IGF1_RABIT     STANDARD;      PRT;   143 AA.
AC   Q95222; O18846;
DT   01-NOV-1997 (Rel. 35, Created)
DT   16-OCT-2001 (Rel. 40, Last sequence update)
DT   10-OCT-2003 (Rel. 42, Last annotation update)
DE   Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
GN   IGF1 OR IGF-1.
OS   Oryctolagus cuniculus (Rabbit).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Lagomorpha; Leporidae; Oryctolagus.
OX   NCBI_TaxID=9986;
RN   [1]
RP   SEQUENCE FROM N.A. (ISOFORM IGF-IA).
RC   STRAIN=ZIKA;
RA   Flekna G., Brem G., Mueller M.;
RL   Submitted (NOV-1996) to the EMBL/GenBank/DDBJ databases.
RN   [2]
RP   SEQUENCE FROM N.A. (ISOFORM IGF-IB).
RC   STRAIN=ZIKA; TISSUE=Liver;
RA   Flekna G., Brem G., Mueller M.;
RL   Submitted (SEP-1997) to the EMBL/GenBank/DDBJ databases.
CC   -!- FUNCTION: The insulin-like growth factors, isolated from plasma,
CC       are structurally and functionally related to insulin but have a
CC       much higher growth-promoting activity.
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- ALTERNATIVE PRODUCTS:
CC       Event=Alternative splicing; Named isoforms=2;
CC       Name=IGF-IB;
CC         IsoId=Q95222-1; Sequence=Displayed;
CC       Name=IGF-IA;
CC         IsoId=Q95222-2; Sequence=VSP_002705;
CC   -!- SIMILARITY: Belongs to the insulin family.
CC   ---------------------------------------------------------------------
CC   This SWISS-PROT entry is copyright. It is produced through a collaboration
CC   between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC   the European Bioinformatics Institute. There are no restrictions on its
CC   use by non-profit institutions as long as its content is in no way
CC   modified and this statement is not removed. Usage by and for commercial
CC   entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; U75390; AAB48032.1; -.
DR   EMBL; AF022961; AAB80950.1; -.
DR   HSSP; P01343; 1GF1.
DR   InterPro; IPR004825; Ins/IGF/relax.
DR   Pfam; PF00049; Insulin; 1.
DR   PRINTS; PR00277; INSULINB.
DR   SMART; SM00078; IlGF; 1.
DR   PROSITE; PS00262; INSULIN; 1.
KW   Insulin family; Growth factor; Plasma; Signal; Alternative splicing.
FT   SIGNAL        1     32       POTENTIAL.
FT   CHAIN        33    102       INSULIN-LIKE GROWTH FACTOR I.
FT   PROPEP      103    143       E PEPTIDE.
FT   DOMAIN       33     61       B.
FT   DOMAIN       62     73       C.
FT   DOMAIN       74     94       A.
FT   DOMAIN       95    102       D.
FT   DISULFID     38     80       BY SIMILARITY.
FT   DISULFID     50     93       BY SIMILARITY.
FT   DISULFID     79     84       BY SIMILARITY.
FT   VARSPLIC    119    143       YQPPSTNKKMKSQRRRKGSTFEEHK -> EVHLKNTSRGSA
FT                                GNKNYRM (in isoform IGF-IA).
FT                                /FTId=VSP_002705.
SQ   SEQUENCE   143 AA;  16091 MW;  819AF577800A1B1A CRC64;

  Query Match             100.0%;  Score 86;  DB 1;  Length 143;
  Best Local Similarity   100.0%;  Pred. No. 7.3e-83;
  Matches   86;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAKAARSVRAQRHTDMPKTQ 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         58 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAKAARSVRAQRHTDMPKTQ 117

Qy         61 KYQPPSTNKKMKSQRRRKGSTFEEHK 86
              ||||||||||||||||||||||||||
Db        118 KYQPPSTNKKMKSQRRRKGSTFEEHK 143


RESULT 2
IGF1_SUNMU
ID   IGF1_SUNMU     STANDARD;      PRT;    81 AA.
AC   Q28933;
DT   16-OCT-2001 (Rel. 40, Created)
DT   16-OCT-2001 (Rel. 40, Last sequence update)
DT   10-OCT-2003 (Rel. 42, Last annotation update)
DE   Insulin-like growth factor I precursor (IGF-I) (Somatomedin)
DE   (Fragment).
GN   IGF1.
OS   Suncus murinus (House shrew) (Musk shrew).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Insectivora; Soricidae; Crocidurinae; Suncus.
OX   NCBI_TaxID=9378;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=BAN, and NAG; TISSUE=Liver;
RA   Ishikawa A.;
RT   "Partial sequence of a IGF-I cDNA in the musk shrew, Suncus murinus.";
RL   Submitted (DEC-1994) to the EMBL/GenBank/DDBJ databases.
CC   -!- FUNCTION: The insulin-like growth factors, isolated from plasma,
CC       are structurally and functionally related to insulin but have a
CC       much higher growth-promoting activity.
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- SIMILARITY: Belongs to the insulin family.
CC   ---------------------------------------------------------------------
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CC   entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; D43957; BAA07897.1; -.
DR   HSSP; P01343; 1GF1.
DR   InterPro; IPR004825; Ins/IGF/relax.
DR   Pfam; PF00049; Insulin; 1.
DR   PRINTS; PR00276; INSULINA.
DR   PRINTS; PR00277; INSULINB.
DR   SMART; SM00078; IlGF; 1.
DR   PROSITE; PS00262; INSULIN; 1.
KW   Insulin family; Growth factor; Plasma.
FT   NON_TER       1      1
FT   PROPEP       <1      4       BY SIMILARITY.
FT   CHAIN         5     74       INSULIN-LIKE GROWTH FACTOR I.
FT   DOMAIN        5     33       B.
FT   DOMAIN       34     45       C.
FT   DOMAIN       46     66       A.
FT   DOMAIN       67     74       D.
FT   PROPEP       75    >81       E PEPTIDE.
FT   DISULFID     10     52       BY SIMILARITY.
FT   DISULFID     22     65       BY SIMILARITY.
FT   DISULFID     51     56       BY SIMILARITY.
FT   NON_TER      81     81
SQ   SEQUENCE   81 AA;  8869 MW;  AC2C40972D05E3C4 CRC64;

  Query Match             60.5%;  Score 52;  DB 1;  Length 81;
  Best Local Similarity   100.0%;  Pred. No. 1.8e-47;
  Matches   52;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAKAARSVRAQR 52
              ||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         30 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAKAARSVRAQR 81


RESULT 3
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```
IGF1_CANFA
ID   IGF1_CANFA     STANDARD;      PRT;   122 AA.
AC   P33712;
DT   01-FEB-1994 (Rel. 28, Created)
DT   01-FEB-1994 (Rel. 28, Last sequence update)
DT   10-OCT-2003 (Rel. 42, Last annotation update)
DE   Insulin-like growth factor I precursor (IGF-I) (Somatomedin)
DE   (Fragment).
GN   IGF1 OR IGFIA.
OS   Canis familiaris (Dog).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Carnivora; Fissipedia; Canidae; Canis.
OX   NCBI_TaxID=9615;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=93366192; PubMed=8359700;
RA   Delafontaine P., Lou H., Harrison D.G., Bernstein K.E.;
RT   "Sequence of a cDNA encoding dog insulin-like growth factor I.";
RL   Gene 130:305-306(1993).
CC   -!- FUNCTION: The insulin-like growth factors, isolated from plasma,
CC       are structurally and functionally related to insulin but have a
CC       much higher growth-promoting activity.
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- SIMILARITY: Belongs to the insulin family.
CC   ---------------------------------------------------------------------
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CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; L08254; -; NOT_ANNOTATED_CDS.
DR   PIR; PN0622; PN0622.
DR   HSSP; P01343; 1GF1.
DR   InterPro; IPR004825; Ins/IGF/relax.
DR   Pfam; PF00049; Insulin; 1.
DR   PRINTS; PR00277; INSULINB.
DR   SMART; SM00078; IlGF; 1.
DR   PROSITE; PS00262; INSULIN; 1.
KW   Insulin family; Growth factor; Plasma; Signal.
FT   NON_TER       1      1
FT   SIGNAL       <1     19       BY SIMILARITY.
FT   CHAIN        20     89       INSULIN-LIKE GROWTH FACTOR I.
FT   DOMAIN       20     48       B.
FT   DOMAIN       49     60       C.
FT   DOMAIN       61     81       A.
FT   DOMAIN       82     89       D.
FT   PROPEP       90    122       E PEPTIDE.
FT   DISULFID     25     67       BY SIMILARITY.
FT   DISULFID     37     80       BY SIMILARITY.
FT   DISULFID     66     71       BY SIMILARITY.
SQ   SEQUENCE   122 AA;  13407 MW;  036A004DC44E7D75 CRC64;

  Query Match             50.0%;  Score 43;  DB 1;  Length 122;
  Best Local Similarity   100.0%;  Pred. No. 6.8e-38;
  Matches   43;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
              |||||||||||||||||||||||||||||||||||||||||||
Db         45 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 87


RESULT 4
IGF1_HORSE
ID   IGF1_HORSE     STANDARD;      PRT;   122 AA.
AC   P51458;
DT   01-OCT-1996 (Rel. 34, Created)
DT   01-OCT-1996 (Rel. 34, Last sequence update)
DT   10-OCT-2003 (Rel. 42, Last annotation update)
DE   Insulin-like growth factor I precursor (IGF-I) (Somatomedin)
DE   (Fragment).
GN   IGF1.
OS   Equus caballus (Horse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Perissodactyla; Equidae; Equus.
OX   NCBI_TaxID=9796;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Liver;
RX   MEDLINE=97013467; PubMed=8860303;
RA   Otte K., Rozell B., Gessbo A., Engstrom W.;
RT   "Cloning and sequencing of an equine insulin-like growth factor I
RT   cDNA and its expression in fetal and adult tissues.";
RL   Gen. Comp. Endocrinol. 102:11-15(1996).
CC   -!- FUNCTION: The insulin-like growth factors, isolated from plasma,
CC       are structurally and functionally related to insulin but have a
CC       much higher growth-promoting activity.
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- SIMILARITY: Belongs to the insulin family.
CC   ---------------------------------------------------------------------
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CC   use by non-profit institutions as long as its content is in no way
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CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; U28070; AAA68952.1; -.
DR   HSSP; P01343; 1GF1.
DR   InterPro; IPR004825; Ins/IGF/relax.
DR   Pfam; PF00049; Insulin; 1.
DR   PRINTS; PR00277; INSULINB.
DR   SMART; SM00078; IlGF; 1.
DR   PROSITE; PS00262; INSULIN; 1.
KW   Insulin family; Growth factor; Plasma; Signal.
FT   SIGNAL        1      ?
FT   PROPEP        ?     48       BY SIMILARITY.
FT   CHAIN        49    118       INSULIN-LIKE GROWTH FACTOR I.
FT   DOMAIN       49     77       B.
FT   DOMAIN       78     89       C.
FT   DOMAIN       90    110       A.
FT   DOMAIN      111    118       D.
FT   PROPEP      119   >122       E PEPTIDE.
FT   DISULFID     54     96       BY SIMILARITY.
FT   DISULFID     66    109       BY SIMILARITY.
FT   DISULFID     95    100       BY SIMILARITY.
FT   NON_TER     122    122
SQ   SEQUENCE   122 AA;  13501 MW;  5A935B334435C9F9 CRC64;

  Query Match             50.0%;  Score 43;  DB 1;  Length 122;
  Best Local Similarity   100.0%;  Pred. No. 6.8e-38;
  Matches   43;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
              |||||||||||||||||||||||||||||||||||||||||||
Db         74 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 116


RESULT 5
IGF1_CAVPO
ID   IGF1_CAVPO     STANDARD;      PRT;   130 AA.
AC   P17647;
DT   01-AUG-1990 (Rel. 15, Created)
DT   01-AUG-1990 (Rel. 15, Last sequence update)
DT   10-OCT-2003 (Rel. 42, Last annotation update)
DE   Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
GN   IGF1.
OS   Cavia porcellus (Guinea pig).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Hystricognathi; Caviidae; Cavia.
OX   NCBI_TaxID=10141;
RN   [1]
RP   SEQUENCE FROM N.A.
```

```
RC   TISSUE=Pancreas;
RX   MEDLINE=90332447; PubMed=2377480;
RA   Bell G.I., Stempien M.M., Fong N.M., Scino S.;
RT   "Sequence of a cDNA encoding guinea pig IGF-I.";
RL   Nucleic Acids Res. 18:4275-4275(1990).
CC   -!- FUNCTION: The insulin-like growth factors, isolated from plasma,
CC       are structurally and functionally related to insulin but have a
CC       much higher growth-promoting activity.
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- SIMILARITY: Belongs to the insulin family.
CC   ---------------------------------------------------------------------
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CC   between the Swiss Institute of Bioinformatics and the EMBL outstation -
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CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; X52951; CAA37127.1; -.
DR   PIR; S12719; IGGP1.
DR   HSSP; P01343; 1GF1.
DR   InterPro; IPR004825; Ins/IGF/relax.
DR   Pfam; PF00049; Insulin; 1.
DR   PRINTS; PR00277; INSULINB.
DR   SMART; SM00078; IlGF; 1.
DR   PROSITE; PS00262; INSULIN; 1.
KW   Insulin family; Growth factor; Plasma; Signal.
FT   SIGNAL        1     25
FT   CHAIN        26     95       INSULIN-LIKE GROWTH FACTOR I.
FT   DOMAIN       26     54       B.
FT   DOMAIN       55     66       C.
FT   DOMAIN       67     87       A.
FT   DOMAIN       88     95       D.
FT   PROPEP       96    130       E PEPTIDE.
FT   DISULFID     31     73       BY SIMILARITY.
FT   DISULFID     43     86       BY SIMILARITY.
FT   DISULFID     72     77       BY SIMILARITY.
SQ   SEQUENCE   130 AA;  14342 MW;  251B20AEDC5729FF CRC64;

  Query Match             50.0%;  Score 43;  DB 1;  Length 130;
  Best Local Similarity   100.0%;  Pred. No. 7.2e-38;
  Matches   43;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
              |||||||||||||||||||||||||||||||||||||||||||
Db         51 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 93


RESULT 6
IGF1_PIG
ID   IGF1_PIG       STANDARD;      PRT;   153 AA.
AC   P16545;
DT   01-AUG-1990 (Rel. 15, Created)
DT   01-AUG-1990 (Rel. 15, Last sequence update)
DT   10-OCT-2003 (Rel. 42, Last annotation update)
DE   Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
GN   IGF1.
OS   Sus scrofa (Pig).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Cetartiodactyla; Suina; Suidae; Sus.
OX   NCBI_TaxID=9823;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=90221822; PubMed=2326169;
RA   Mueller M., Brem G.;
RT   "Nucleotide sequence of porcine insulin-like growth factor. 1:5'
RT   untranslated region, exons 1 and 2 and mRNA.";
RL   Nucleic Acids Res. 18:364-364(1990).
RN   [2]
RP   SEQUENCE OF 20-153 FROM N.A.
RX   MEDLINE=89096956; PubMed=3211153;
RA   Tavakkol A., Simmen F.A., Simmen R.C.M.;
RT   "Porcine insulin-like growth factor-I (pIGF-I): complementary
RT   deoxyribonucleic acid cloning and uterine expression of messenger
RT   ribonucleic acid encoding evolutionarily conserved IGF-I peptides.";
RL   Mol. Endocrinol. 2:674-681(1988).
RN   [3]
RP   SEQUENCE OF 1-21 FROM N.A.
RC   STRAIN=White Landrace; TISSUE=Liver;
RX   MEDLINE=94128209; PubMed=8297476;
RA   Weller P.A., Dickson M.C., Huskisson N.S., Dauncey M.J., Buttery P.J.,
RA   Gilmour R.S.;
RT   "The porcine insulin-like growth factor-I gene: characterization and
RT   expression of alternate transcription sites.";
RL   J. Mol. Endocrinol. 11:201-211(1993).
CC   -!- FUNCTION: The insulin-like growth factors, isolated from plasma,
CC       are structurally and functionally related to insulin but have a
CC       much higher growth-promoting activity.
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- SIMILARITY: Belongs to the insulin family.
CC   ---------------------------------------------------------------------
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CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; X17492; CAA35527.1; -.
DR   EMBL; X52388; CAA36617.1; -.
DR   EMBL; X52077; CAA36296.1; -.
DR   EMBL; M31175; AAA31043.1; ALT_INIT.
DR   EMBL; X17638; CAA35632.1; -.
DR   PIR; S12825; S12825.
DR   HSSP; P01343; 1GF1.
DR   InterPro; IPR004825; Ins/IGF/relax.
DR   Pfam; PF00049; Insulin; 1.
DR   PRINTS; PR00277; INSULINB.
DR   SMART; SM00078; IlGF; 1.
DR   PROSITE; PS00262; INSULIN; 1.
KW   Insulin family; Growth factor; Plasma; Signal.
FT   SIGNAL        1      ?
FT   PROPEP        ?     48
FT   CHAIN        49    118       INSULIN-LIKE GROWTH FACTOR I.
FT   DOMAIN       49     77       B.
FT   DOMAIN       78     89       C.
FT   DOMAIN       90    110       A.
FT   DOMAIN      111    118       D.
FT   PROPEP      119    153       E PEPTIDE.
FT   DISULFID     54     96       BY SIMILARITY.
FT   DISULFID     66    109       BY SIMILARITY.
FT   DISULFID     95    100       BY SIMILARITY.
SQ   SEQUENCE   153 AA;  17010 MW;  6098792DCDA0CD7D CRC64;

  Query Match             50.0%;  Score 43;  DB 1;  Length 153;
  Best Local Similarity   100.0%;  Pred. No. 8.3e-38;
  Matches   43;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
              |||||||||||||||||||||||||||||||||||||||||||
Db         74 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 116


RESULT 7
IGFA_HUMAN
ID   IGFA_HUMAN     STANDARD;      PRT;   153 AA.
AC   P01343;
DT   21-JUL-1986 (Rel. 01, Created)
DT   13-AUG-1987 (Rel. 05, Last sequence update)
DT   10-OCT-2003 (Rel. 42, Last annotation update)
DE   Insulin-like growth factor IA precursor (IGF-IA) (Somatomedin C).
GN   IGF1 OR IBP1.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
```

OC Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX NCBI_TaxID=9606;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=86168194; PubMed=2937782;
RA Rotwein P., Pollock K.M., Didier D.K., Krivi G.G.;
RT "Organization and sequence of the human insulin-like growth factor I
RT gene. Alternative RNA processing produces two insulin-like growth
RT factor I precursor peptides.";
RL J. Biol. Chem. 261:4828-4832(1986).
RN [2]
RP SEQUENCE FROM N.A.
RX MEDLINE=84068210; PubMed=6358902;
RA Jansen M., van Schaik F.M.A., Ricker A.T., Bullock B., Woods D.E.,
RA Gabbay K.H., Nussbaum A.L., Sussenbach J.S., van den Brande J.L.;
RT "Sequence of cDNA encoding human insulin-like growth factor I
RT precursor.";
RL Nature 306:609-611(1983).
RN [3]
RP SEQUENCE FROM N.A.
RX MEDLINE=86108910; PubMed=2935423;
RA le Bouc Y., Dreyer D., Jaeger F., Binoux M., Sondermeyer P.;
RT "Complete characterization of the human IGF-I nucleotide sequence
RT isolated from a newly constructed adult liver cDNA library.";
RL FEBS Lett. 196:108-112(1986).
RN [4]
RP SEQUENCE FROM N.A.
RX MEDLINE=86108862; PubMed=3002851;
RA de Pagter-Holthuizen P., van Schaik F.M.A., Verduijn G.M.,
RA van Ommen G.J.B., Bouma B.N., Jansen M., Sussenbach J.S.;
RT "Organization of the human genes for insulin-like growth factors I
RT and II.";
RL FEBS Lett. 195:179-184(1986).
RN [5]
RP SEQUENCE FROM N.A.
RC TISSUE=Liver;
RX MEDLINE=91207342; PubMed=2018498;
RA Steenbergh P.H., Koonen-Reemst A.M.C.B., Cleutjens C.B.J.M.,
RA Sussenbach J.S.;
RT "Complete nucleotide sequence of the high molecular weight human
RT IGF-I mRNA.";
RL Biochem. Biophys. Res. Commun. 175:507-514(1991).
RN [6]
RP SEQUENCE FROM N.A.
RC TISSUE=Brain;
RX MEDLINE=92186627; PubMed=1372070;
RA Sandberg Nordqvist A.C., Stahlbom P.A., Lake M., Sara V.R.;
RT "Characterization of two cDNAs encoding insulin-like growth factor 1
RT (IGF-1) in the human fetal brain.";
RL Brain Res. Mol. Brain Res. 12:275-277(1992).
RN [7]
RP SEQUENCE OF 24-50 AND 119-153 FROM N.A.
RX MEDLINE=84295593; PubMed=6382022;
RA Dull T.J., Gray A., Hayflick J.S., Ullrich A.;
RT "Insulin-like growth factor II precursor gene organization in
RT relation to insulin gene family.";
RL Nature 310:777-781(1984).
RN [8]
RP SEQUENCE OF 49-118.
RX MEDLINE=78130171; PubMed=632300;
RA Rinderknecht E., Humbel R.E.;
RT "The amino acid sequence of human insulin-like growth factor I and
RT its structural homology with proinsulin.";
RL J. Biol. Chem. 253:2769-2776(1978).
RN [9]
RP 3D-STRUCTURE MODELING.
RX MEDLINE=83210259; PubMed=6189745;
RA Blundell T.L., Bedarkar S., Humbel R.E.;
RT "Tertiary structures, receptor binding, and antigenicity of
RT insulinlike growth factors.";
RL Fed. Proc. 42:2592-2597(1983).
RN [10]
RP STRUCTURE BY NMR.
RX MEDLINE=91242464; PubMed=2036417;
RA Cooke R.M., Harvey T.S., Campbell I.D.;
RT "Solution structure of human insulin-like growth factor 1: a nuclear
RT magnetic resonance and restrained molecular dynamics study.";
RL Biochemistry 30:5484-5491(1991).
RN [11]
RP STRUCTURE BY NMR.
RX MEDLINE=92316903; PubMed=1319992;
RA Sato A., Nishimura S., Ohkubo T., Kyogoku Y., Koyama S., Kobayashi M.,
RA Yasuda T., Kobayashi Y.;
RT "1H-NMR assignment and secondary structure of human insulin-like
RT growth factor-I (IGF-I) in solution.";
RL J. Biochem. 111:529-536(1992).
RN [12]
RP DISULFIDE BONDS.
RX MEDLINE=89207850; PubMed=3242681;
RA Raschdorf F., Dahinden R., Maerki W., Richter W.J., Merryweather J.P.;
RT "Location of disulphide bonds in human insulin-like growth factors
RT (IGFs) synthesized by recombinant DNA technology.";
RL Biomed. Environ. Mass Spectrom. 16:3-8(1988).
CC -!- FUNCTION: The insulin-like growth factors, isolated from plasma,
CC are structurally and functionally related to insulin but have a
CC much higher growth-promoting activity.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- ALTERNATIVE PRODUCTS:
CC Event=Alternative splicing; Named isoforms=2;
CC Name=IGF-IA;
CC IsoId=P01343-1; Sequence=Displayed;
CC Name=IGF-IB;
CC IsoId=P05019-1; Sequence=External;
CC -!- SIMILARITY: Belongs to the insulin family.
CC -!-

DR EMBL; M14156; AAA52538.1; -.
DR EMBL; M12659; AAA52538.1; JOINED.
DR EMBL; M14153; AAA52538.1; JOINED.
DR EMBL; M14154; AAA52538.1; JOINED.
DR EMBL; X00173; CAA24998.1; -.
DR EMBL; X03563; CAA27250.1; ALT_SEQ.
DR EMBL; M27544; AAA52787.1; -.
DR EMBL; X03420; CAA27152.1; -.
DR EMBL; X03421; CAA27153.1; -.
DR EMBL; X03422; CAA27154.1; -.
DR EMBL; X57025; CAA40342.1; -.
DR EMBL; X56773; CAA40092.1; -.
DR PIR; A92581; IGHU1.
DR PDB; 1GF1; 15-OCT-94.
DR PDB; 2GF1; 15-APR-93.
DR PDB; 3GF1; 15-APR-93.
DR PDB; 1B9G; 23-FEB-99.
DR PDB; 1GZR; 02-OCT-02.
DR PDB; 1GZY; 02-OCT-02.
DR PDB; 1GZZ; 25-JUL-02.
DR PDB; 1H02; 25-JUL-02.
DR PDB; 1H59; 16-MAY-02.
DR PDB; 1IMX; 03-OCT-01.
DR Genew; HGNC:5464; IGF1.
DR MIM; 147440; -.
DR MIM; 265850; -.
DR GO; GO:0005159; F:insulin-like growth factor receptor binding; TAS.
DR GO; GO:0005180; F:peptide hormone; TAS.
DR GO; GO:0006928; P:cell motility; TAS.
DR GO; GO:0006260; P:DNA replication; TAS.
DR GO; GO:0009441; P:glycolate metabolism; TAS.
DR GO; GO:0007517; P:muscle development; TAS.
DR GO; GO:0008284; P:positive regulation of cell proliferation; TAS.

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DR   GO; GO:0007265; P:RAS protein signal transduction; TAS.
DR   GO; GO:0007165; P:signal transduction; TAS.
DR   GO; GO:0001501; P:skeletal development; TAS.
DR   InterPro; IPR004825; Ins/IGF/relax.
DR   Pfam; PF00049; Insulin; 1.
DR   PRINTS; PR00277; INSULINB.
DR   SMART; SM00078; IlGF; 1.
DR   PROSITE; PS00262; INSULIN; 1.
KW   Insulin family; Growth factor; Plasma; 3D-structure;
KW   Alternative splicing; Signal.
FT   SIGNAL        1     21       POTENTIAL.
FT   PROPEP       22     48
FT   CHAIN        49    118       INSULIN-LIKE GROWTH FACTOR IA.
FT   DOMAIN       49     77       B.
FT   DOMAIN       78     89       C.
FT   DOMAIN       90    110       A.
FT   DOMAIN      111    118       D.
FT   PROPEP      119    153       E PEPTIDE.
FT   DISULFID     54     96
FT   DISULFID     66    109
FT   DISULFID     95    100
FT   STRAND       51     51
FT   TURN         55     55
FT   HELIX        56     69
FT   TURN         87     88
FT   HELIX        91     95
FT   TURN         96     97
FT   STRAND       99     99
FT   HELIX       106    109
SQ   SEQUENCE   153 AA;  17026 MW;  C6ECD92DCA9B37BC CRC64;

  Query Match             50.0%;  Score 43;  DB 1;  Length 153;
  Best Local Similarity   100.0%;  Pred. No. 8.3e-38;
  Matches   43;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
              |||||||||||||||||||||||||||||||||||||||||||
Db         74 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 116


RESULT 8
IGF1_BOVIN
ID   IGF1_BOVIN     STANDARD;      PRT;   154 AA.
AC   P07455;
DT   01-APR-1988 (Rel. 07, Created)
DT   01-NOV-1991 (Rel. 20, Last sequence update)
DT   10-OCT-2003 (Rel. 42, Last annotation update)
DE   Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
GN   IGF1.
OS   Bos taurus (Bovine).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
OC   Bovidae; Bovinae; Bos.
OX   NCBI_TaxID=9913;
RN   [1]
RP   SEQUENCE OF 2-154 FROM N.A.
RX   MEDLINE=90175014; PubMed=2308858;
RA   Fotsis T., Murphy C., Gannon F.;
RT   "Nucleotide sequence of the bovine insulin-like growth factor 1
RT   (IGF-1) and its IGF-1A precursor.";
RL   Nucleic Acids Res. 18:676-676(1990).
RN   [2]
RP   SEQUENCE OF 50-119 FROM N.A.
RX   MEDLINE=95172127; PubMed=7867698;
RA   Schmidt A., Einspanier R., Amselgruber W., Sinowatz F., Schams D.;
RT   "Expression of insulin-like growth factor 1 (IGF-1) in the bovine
RT   oviduct during the oestrous cycle.";
RL   Exp. Clin. Endocrinol. 102:364-369(1994).
RN   [3]
RP   SEQUENCE OF 50-119.
RX   MEDLINE=86085881; PubMed=3941093;
RA   Honegger A., Humbel R.E.;
RT   "Insulin-like growth factors I and II in fetal and adult bovine
RT   serum. Purification, primary structures, and immunological
RT   cross-reactivities.";
RL   J. Biol. Chem. 261:569-575(1986).
RN   [4]
RP   SEQUENCE OF 50-119.
RX   MEDLINE=88268820; PubMed=3390164;
RA   Francis G.L., Upton F.M., Ballard F.J., McNeil K.A., Wallace J.C.;
RT   "Insulin-like growth factors 1 and 2 in bovine colostrum. Sequences
RT   and biological activities compared with those of a potent truncated
RT   form.";
RL   Biochem. J. 251:95-103(1988).
CC   -!- FUNCTION: The insulin-like growth factors, isolated from plasma,
CC       are structurally and functionally related to insulin but have a
CC       much higher growth-promoting activity.
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- SIMILARITY: Belongs to the insulin family.
CC   ---------------------------------------------------------------------
CC   This SWISS-PROT entry is copyright. It is produced through a collaboration
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CC   the European Bioinformatics Institute. There are no restrictions on its
CC   use by non-profit institutions as long as its content is in no way
CC   modified and this statement is not removed. Usage by and for commercial
CC   entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; X15726; CAA33746.1; -.
DR   EMBL; S76122; AAD14209.1; -.
DR   PIR; S12672; IGBO1.
DR   HSSP; P01343; 1GF1.
DR   InterPro; IPR004825; Ins/IGF/relax.
DR   Pfam; PF00049; Insulin; 1.
DR   PRINTS; PR00277; INSULINB.
DR   SMART; SM00078; IlGF; 1.
DR   PROSITE; PS00262; INSULIN; 1.
KW   Insulin family; Growth factor; Plasma; Signal.
FT   SIGNAL        1      ?
FT   PROPEP        ?     49
FT   CHAIN        50    119       INSULIN-LIKE GROWTH FACTOR I.
FT   DOMAIN       50     78       B.
FT   DOMAIN       79     90       C.
FT   DOMAIN       91    111       A.
FT   DOMAIN      112    119       D.
FT   PROPEP      120    154       E PEPTIDE.
FT   DISULFID     55     97       BY SIMILARITY.
FT   DISULFID     67    110       BY SIMILARITY.
FT   DISULFID     96    101       BY SIMILARITY.
SQ   SEQUENCE   154 AA;  17066 MW;  64201B6AF3140999 CRC64;

  Query Match             50.0%;  Score 43;  DB 1;  Length 154;
  Best Local Similarity   100.0%;  Pred. No. 8.4e-38;
  Matches   43;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
              |||||||||||||||||||||||||||||||||||||||||||
Db         75 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 117


RESULT 9
IGFB_HUMAN
ID   IGFB_HUMAN     STANDARD;      PRT;   195 AA.
AC   P05019;
DT   13-AUG-1987 (Rel. 05, Created)
DT   13-AUG-1987 (Rel. 05, Last sequence update)
DT   10-OCT-2003 (Rel. 42, Last annotation update)
DE   Insulin-like growth factor IB precursor (IGF-IB) (Somatomedin C).
GN   IGF1 OR IBP1.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=86168194; PubMed=2937782;
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RA   Rotwein P., Pollock K.M., Didier D.K., Krivi G.G.;
RT   "Organization and sequence of the human insulin-like growth factor I
RT   gene. Alternative RNA processing produces two insulin-like growth
RT   factor I precursor peptides.";
RL   J. Biol. Chem. 261:4828-4832(1986).
RN   [2]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=86094355; PubMed=3455760;
RA   Rotwein P.;
RT   "Two insulin-like growth factor I messenger RNAs are expressed in
RT   human liver.";
RL   Proc. Natl. Acad. Sci. U.S.A. 83:77-81(1986).
RN   [3]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=86108862; PubMed=3002851;
RA   de Pagter-Holthuizen P., van Schaik F.M.A., Verduijn G.M.,
RA   van Ommen G.J.B., Bouma B.N., Jansen M., Sussenbach J.S.;
RT   "Organization of the human genes for insulin-like growth factors I
RT   and II.";
RL   FEBS Lett. 195:179-184(1986).
RN   [4]
RP   SEQUENCE OF 22-50 FROM N.A.
RX   MEDLINE=84295593; PubMed=6382022;
RA   Dull T.J., Gray A., Hayflick J.S., Ullrich A.;
RT   "Insulin-like growth factor II precursor gene organization in
RT   relation to insulin gene family.";
RL   Nature 310:777-781(1984).
RN   [5]
RP   SEQUENCE OF 49-118.
RX   MEDLINE=78130171; PubMed=632300;
RA   Rinderknecht E., Humbel R.E.;
RT   "The amino acid sequence of human insulin-like growth factor I and
RT   its structural homology with proinsulin.";
RL   J. Biol. Chem. 253:2769-2776(1978).
RN   [6]
RP   3D-STRUCTURE MODELING.
RX   MEDLINE=83210259; PubMed=6189745;
RA   Blundell T.L., Bedarkar S., Humbel R.E.;
RT   "Tertiary structures, receptor binding, and antigenicity of
RT   insulinlike growth factors.";
RL   Fed. Proc. 42:2592-2597(1983).
RN   [7]
RP   STRUCTURE BY NMR.
RX   MEDLINE=91242464; PubMed=2036417;
RA   Cooke R.M., Harvey T.S., Campbell I.D.;
RT   "Solution structure of human insulin-like growth factor 1: a nuclear
RT   magnetic resonance and restrained molecular dynamics study.";
RL   Biochemistry 30:5484-5491(1991).
RN   [8]
RP   STRUCTURE BY NMR.
RX   MEDLINE=92316903; PubMed=1319992;
RA   Sato A., Nishimura S., Ohkubo T., Kyogoku Y., Koyama S., Kobayashi M.,
RA   Yasuda T., Kobayashi Y.;
RT   "1H-NMR assignment and secondary structure of human insulin-like
RT   growth factor-I (IGF-I) in solution.";
RL   J. Biochem. 111:529-536(1992).
RN   [9]
RP   DISULFIDE BONDS.
RX   MEDLINE=89207850; PubMed=3242681;
RA   Raschdorf F., Dahinden R., Maerki W., Richter W.J., Merryweather J.P.;
RT   "Location of disulphide bonds in human insulin-like growth factors
RT   (IGFs) synthesized by recombinant DNA technology.";
RL   Biomed. Environ. Mass Spectrom. 16:3-8(1988).
RN   [10]
RP   VARIANT ASP-187.
RX   MEDLINE=99318093; PubMed=10391209;
RA   Cargill M., Altshuler D., Ireland J., Sklar P., Ardlie K., Patil N.,
RA   Shaw N., Lane C.R., Lim E.P., Kalyanaraman N., Nemesh J., Ziaugra L.,
RA   Friedland L., Rolfe A., Warrington J., Lipshutz R., Daley G.Q.,
RA   Lander E.S.;
RT   "Characterization of single-nucleotide polymorphisms in coding regions
RT   of human genes.";
RL   Nat. Genet. 22:231-238(1999).
RN   [11]
RP   ERRATUM.
RA   Cargill M., Altshuler D., Ireland J., Sklar P., Ardlie K., Patil N.,
RA   Shaw N., Lane C.R., Lim E.P., Kalyanaraman N., Nemesh J., Ziaugra L.,
RA   Friedland L., Rolfe A., Warrington J., Lipshutz R., Daley G.Q.,
RA   Lander E.S.;
RL   Nat. Genet. 23:373-373(1999).
CC   -!- FUNCTION: The insulin-like growth factors, isolated from plasma,
CC       are structurally and functionally related to insulin but have a
CC       much higher growth-promoting activity.
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- ALTERNATIVE PRODUCTS:
CC       Event=Alternative splicing; Named isoforms=2;
CC       Name=IGF-IB;
CC         IsoId=P05019-1; Sequence=Displayed;
CC       Name=IGF-IA;
CC         IsoId=P01343-1; Sequence=External;
CC   -!- SIMILARITY: Belongs to the insulin family.
CC   ---------------------------------------------------------------------
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CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; M14155; AAA52537.1; -.
DR   EMBL; M12659; AAA52537.1; JOINED.
DR   EMBL; M14153; AAA52537.1; JOINED.
DR   EMBL; M14154; AAA52537.1; JOINED.
DR   EMBL; M11568; AAA52539.1; -.
DR   EMBL; X03563; CAA27250.1; ALT_SEQ.
DR   EMBL; X03420; CAA27152.1; -.
DR   EMBL; X03421; CAA27153.1; -.
DR   EMBL; X03422; CAA27154.1; -.
DR   PIR; A01611; IGHU1B.
DR   PDB; 1GF1; 15-OCT-94.
DR   PDB; 2GF1; 15-APR-93.
DR   PDB; 3GF1; 15-APR-93.
DR   PDB; 1BQT; 18-MAY-99.
DR   Genew; HGNC:5464; IGF1.
DR   MIM; 147440; -.
DR   MIM; 265850; -.
DR   GO; GO:0005159; F:insulin-like growth factor receptor binding; TAS.
DR   GO; GO:0005180; F:peptide hormone; TAS.
DR   GO; GO:0006928; P:cell motility; TAS.
DR   GO; GO:0006260; P:DNA replication; TAS.
DR   GO; GO:0009441; P:glycolate metabolism; TAS.
DR   GO; GO:0007517; P:muscle development; TAS.
DR   GO; GO:0008284; P:positive regulation of cell proliferation; TAS.
DR   GO; GO:0007265; P:RAS protein signal transduction; TAS.
DR   GO; GO:0007165; P:signal transduction; TAS.
DR   GO; GO:0001501; P:skeletal development; TAS.
DR   InterPro; IPR004825; Ins/IGF/relax.
DR   Pfam; PF00049; Insulin; 1.
DR   PRINTS; PR00277; INSULINB.
DR   SMART; SM00078; IlGF; 1.
DR   PROSITE; PS00262; INSULIN; 1.
KW   Insulin family; Growth factor; 3D-structure; Plasma;
KW   Alternative splicing; Signal; Polymorphism.
FT   SIGNAL        1     21       POTENTIAL.
FT   PROPEP       22     48
FT   CHAIN        49    118       INSULIN-LIKE GROWTH FACTOR IB.
FT   DOMAIN       49     77       B.
FT   DOMAIN       78     89       C.
FT   DOMAIN       90    110       A.
FT   DOMAIN      111    118       D.
FT   PROPEP      119    195       E PEPTIDE.
FT   DISULFID     54     96
FT   DISULFID     66    109
FT   DISULFID     95    100
FT   VARIANT     187    187       A -> D (in dbSNP:6213).
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FT                                /FTId=VAR_013945.
FT   STRAND       51     51
FT   TURN         55     55
FT   HELIX        56     69
FT   TURN         87     88
FT   HELIX        91     95
FT   TURN         96     97
FT   STRAND       99     99
FT   HELIX       106    109
SQ   SEQUENCE   195 AA;  21841 MW;  E88A8CFBD1CD1873 CRC64;

  Query Match             50.0%;  Score 43;  DB 1;  Length 195;
  Best Local Similarity   100.0%;  Pred. No. 1e-37;
  Matches   43;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 43
              |||||||||||||||||||||||||||||||||||||||||||
Db         74 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAK 116


RESULT 10
IGF1_CAPHI
ID   IGF1_CAPHI     STANDARD;      PRT;   154 AA.
AC   P51457;
DT   01-OCT-1996 (Rel. 34, Created)
DT   16-OCT-2001 (Rel. 40, Last sequence update)
DT   15-MAR-2004 (Rel. 43, Last annotation update)
DE   Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
GN   IGF1.
OS   Capra hircus (Goat).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
OC   Bovidae; Caprinae; Capra.
OX   NCBI_TaxID=9925;
RN   [1]
RP   SEQUENCE FROM N.A., AND TISSUE SPECIFICITY.
RC   STRAIN=Shiba; TISSUE=Liver;
RX   MEDLINE=95290780; PubMed=7772848;
RA   Mikawa S., Yoshikawa G.-I., Yamano Y., Sakai H., Komano T., Hosoi Y.,
RA   Utsumi K.;
RT   "Tissue- and development-specific expression of goat insulin-like
RT   growth factor-I (IGF-I) mRNAs.";
RL   Biosci. Biotechnol. Biochem. 59:759-761(1995).
CC   -!- FUNCTION: The insulin-like growth factors, isolated from plasma,
CC       are structurally and functionally related to insulin but have a
CC       much higher growth-promoting activity.
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- TISSUE SPECIFICITY: Expressed in all tissues examined: brain,
CC       lung, liver, spleen, uterus, ovary, testis, heart and skeletal
CC       muscle.
CC   -!- SIMILARITY: Belongs to the insulin family.
CC   ---------------------------------------------------------------------
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CC   entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; D11378; BAA01976.1; -.
DR   EMBL; D26119; BAB77524.1; ALT_SEQ.
DR   EMBL; D26116; BAB77524.1; JOINED.
DR   EMBL; D26117; BAB77524.1; JOINED.
DR   EMBL; D26118; BAB77524.1; JOINED.
DR   PIR; JC2483; JC2483.
DR   HSSP; P01343; 1GF1.
DR   InterPro; IPR004825; Ins/IGF/relax.
DR   Pfam; PF00049; Insulin; 1.
DR   PRINTS; PR00277; INSULINB.
DR   SMART; SM00078; IlGF; 1.
DR   PROSITE; PS00262; INSULIN; 1.
KW   Insulin family; Growth factor; Plasma; Signal.
FT   SIGNAL       1      ?
FT   PROPEP       ?     49       BY SIMILARITY.
FT   CHAIN       50    119       INSULIN-LIKE GROWTH FACTOR I.
FT   DOMAIN      50     78       B.
FT   DOMAIN      79     90       C.
FT   DOMAIN      91    111       A.
FT   DOMAIN     112    119       D.
FT   PROPEP     120    154       E PEPTIDE.
FT   DISULFID    55     97       BY SIMILARITY.
FT   DISULFID    67    110       BY SIMILARITY.
FT   DISULFID    96    101       BY SIMILARITY.
SQ   SEQUENCE   154 AA;  17082 MW;  07238B6AF3068422 CRC64;

  Query Match             47.7%;  Score 41;  DB 1;  Length 154;
  Best Local Similarity   100.0%;  Pred. No. 1e-35;
  Matches   41;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKP 41
              |||||||||||||||||||||||||||||||||||||||||
Db         75 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKP 115


RESULT 11
IGF1_SHEEP
ID   IGF1_SHEEP     STANDARD;      PRT;   154 AA.
AC   P10763;
DT   01-JUL-1989 (Rel. 11, Created)
DT   01-FEB-1991 (Rel. 17, Last sequence update)
DT   10-OCT-2003 (Rel. 42, Last annotation update)
DE   Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
GN   IGF1.
OS   Ovis aries (Sheep).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
OC   Bovidae; Caprinae; Ovis.
OX   NCBI_TaxID=9940;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Liver;
RX   MEDLINE=90126234; PubMed=2575490;
RA   Wong E.A., Ohlsen S.M., Godfredson J.A., Dean D.M., Wheaton J.E.;
RT   "Cloning of ovine insulin-like growth factor-I cDNAs: heterogeneity
RT   in the mRNA population.";
RL   DNA 8:649-657(1989).
RN   [2]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Liver;
RX   MEDLINE=91197361; PubMed=2015053;
RA   Dickson M.C., Saunders J.C., Gilmour R.S.;
RT   "The ovine insulin-like growth factor-I gene: characterization,
RT   expression and identification of a putative promoter.";
RL   J. Mol. Endocrinol. 6:17-31(1991).
RN   [3]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Liver;
RX   MEDLINE=93221682; PubMed=8466647;
RA   Ohlsen S.M., Dean D.M., Wong E.A.;
RT   "Characterization of multiple transcription initiation sites of the
RT   ovine insulin-like growth factor-I gene and expression profiles of
RT   three alternatively spliced transcripts.";
RL   DNA Cell Biol. 12:243-251(1993).
RN   [4]
RP   SEQUENCE OF 55-135 FROM N.A.
RC   STRAIN=Coopworth; TISSUE=Liver;
RX   MEDLINE=93250051; PubMed=8485157;
RA   Demmer J., Hill D.F., Petersen G.B.;
RT   "Characterization of two sheep insulin-like growth factor II cDNAs
RT   with different 5'-untranslated regions.";
RL   Biochim. Biophys. Acta 1173:79-80(1993).
RN   [5]
RP   SEQUENCE OF 50-119.
RX   MEDLINE=89136887; PubMed=2537174;
RA   Francis G.L., McNeil K.A., Wallace J.C., Ballard F.J., Owens P.C.;
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```
RT   "Sheep insulin-like growth factors I and II: sequences, activities
RT   and assays.";
RL   Endocrinology 124:1173-1183(1989).
RN   [6]
RP   SEQUENCE OF 50-79.
RX   MEDLINE=89323215; PubMed=2752053;
RA   Hey A.W., Browne C.A., Simpson R.J., Thorburn G.D.;
RT   "Simultaneous isolation of insulin-like growth factors I and II from
RT   adult sheep serum.";
RL   Biochim. Biophys. Acta 997:27-35(1989).
CC   -!- FUNCTION: The insulin-like growth factors, isolated from plasma,
CC       are structurally and functionally related to insulin but have a
CC       much higher growth-promoting activity.
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- ALTERNATIVE PRODUCTS:
CC       Event=Alternative splicing; Named isoforms=3;
CC       Name=B;
CC         IsoId=P10763-1; Sequence=Displayed;
CC       Name=A;
CC         IsoId=P10763-2; Sequence=VSP_002707;
CC       Name=C;
CC         IsoId=P10763-3; Sequence=VSP_002706;
CC   -!- SIMILARITY: Belongs to the insulin family.
CC   ---------------------------------------------------------------------------
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CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------------
DR   EMBL; M30653; AAA80532.1; -.
DR   EMBL; M30653; AAA80533.1; -.
DR   EMBL; M31734; AAA80535.1; -.
DR   EMBL; M31734; AAA80534.1; -.
DR   EMBL; M31736; AAA31545.1; -.
DR   EMBL; M31735; AAA31546.1; -.
DR   EMBL; M31735; AAA31547.1; -.
DR   EMBL; X69472; CAA49230.1; -.
DR   EMBL; X69473; CAA49230.1; JOINED.
DR   EMBL; X69474; CAA49230.1; JOINED.
DR   EMBL; X69475; CAA49230.1; JOINED.
DR   EMBL; X69472; CAA49231.1; -.
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DR   EMBL; X69474; CAA49231.1; JOINED.
DR   EMBL; X69475; CAA49231.1; JOINED.
DR   EMBL; X69473; CAA49232.1; -.
DR   EMBL; X69474; CAA49232.1; JOINED.
DR   EMBL; X69475; CAA49232.1; JOINED.
DR   EMBL; M89787; AAA31544.1; -.
DR   PIR; S22877; A33390.
DR   HSSP; P01343; 1GF1.
DR   InterPro; IPR004825; Ins/IGF/relax.
DR   Pfam; PF00049; Insulin; 1.
DR   PRINTS; PR00277; INSULINB.
DR   SMART; SM00078; IlGF; 1.
DR   PROSITE; PS00262; INSULIN; 1.
KW   Insulin family; Growth factor; Plasma; Signal; Alternative splicing.
FT   SIGNAL       1     ?
FT   PROPEP       ?     49
FT   CHAIN       50    119       INSULIN-LIKE GROWTH FACTOR I.
FT   DOMAIN      50     78        B.
FT   DOMAIN      79     90        C.
FT   DOMAIN      91    111        A.
FT   DOMAIN     112    119        D.
FT   PROPEP     120    154        E PEPTIDE.
FT   DISULFID    55     97        BY SIMILARITY.
FT   DISULFID    67    110        BY SIMILARITY.
FT   DISULFID    96    101        BY SIMILARITY.
FT   VARSPLIC     1     21        MGKISSLPTQLFKCCFCDFLK -> MVTPT (in
FT                                isoform C).
FT                                /FTId=VSP_002706.
FT   VARSPLIC     1     34        Missing (in isoform A).
FT                                /FTId=VSP_002707.
FT   CONFLICT    57     57        A -> V (IN REF. 4).
SQ   SEQUENCE   154 AA;  17012 MW;  E226CE6AF653CF3F CRC64;

  Query Match             46.5%;  Score 40;  DB 1;  Length 154;
  Best Local Similarity   100.0%;  Pred. No. 1.2e-34;
  Matches   40;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLK 40
              ||||||||||||||||||||||||||||||||||||||||
Db         75 NKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLK 114


RESULT 12
IGFA_MOUSE
ID   IGFA_MOUSE     STANDARD;      PRT;   127 AA.
AC   P05017;
DT   13-AUG-1987 (Rel. 05, Created)
DT   13-AUG-1987 (Rel. 05, Last sequence update)
DT   10-OCT-2003 (Rel. 42, Last annotation update)
DE   Insulin-like growth factor IA precursor (IGF-IA) (Somatomedin).
GN   IGF1 OR IGF-1.
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Liver;
RX   MEDLINE=87040760; PubMed=3774549;
RA   Bell G.I., Stempien M.M., Fong N.M., Rall L.B.;
RT   "Sequences of liver cDNAs encoding two different mouse insulin-like
RT   growth factor I precursors.";
RL   Nucleic Acids Res. 14:7873-7882(1986).
CC   -!- FUNCTION: The insulin-like growth factors, isolated from plasma,
CC       are structurally and functionally related to insulin but have a
CC       much higher growth-promoting activity.
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- ALTERNATIVE PRODUCTS:
CC       Event=Alternative splicing; Named isoforms=2;
CC       Name=IGF-IA;
CC         IsoId=P05017-1; Sequence=Displayed;
CC       Name=IGF-IB;
CC         IsoId=P05018-1; Sequence=External;
CC   -!- SIMILARITY: Belongs to the insulin family.
CC   ---------------------------------------------------------------------------
CC   This SWISS-PROT entry is copyright. It is produced through a collaboration
CC   between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC   the European Bioinformatics Institute. There are no restrictions on its
CC   use by non-profit institutions as long as its content is in no way
CC   modified and this statement is not removed. Usage by and for commercial
CC   entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------------
DR   EMBL; X04480; CAA28168.1; -.
DR   PIR; A25540; A25540.
DR   HSSP; P01343; 1GF1.
DR   MGD; MGI:96432; Igf1.
DR   GO; GO:0010001; P:glial cell differentiation; IMP.
DR   GO; GO:0007399; P:neurogenesis; IMP.
DR   InterPro; IPR004825; Ins/IGF/relax.
DR   Pfam; PF00049; Insulin; 1.
DR   PRINTS; PR00277; INSULINB.
DR   SMART; SM00078; IlGF; 1.
DR   PROSITE; PS00262; INSULIN; 1.
KW   Insulin family; Growth factor; Plasma; Alternative splicing; Signal.
FT   SIGNAL       1     22
FT   CHAIN       23     92        INSULIN-LIKE GROWTH FACTOR IA.
FT   DOMAIN      23     51        B.
FT   DOMAIN      52     63        C.
FT   DOMAIN      64     84        A.
FT   DOMAIN      85     92        D.
```

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FT   PROPEP       93    127       E PEPTIDE.
FT   DISULFID     28     70       BY SIMILARITY.
FT   DISULFID     40     83       BY SIMILARITY.
FT   DISULFID     69     74       BY SIMILARITY.
SQ   SEQUENCE   127 AA;  14120 MW;  1054B8CAC72DC2D7 CRC64;

  Query Match             36.0%;  Score 31;  DB 1;  Length 127;
  Best Local Similarity   100.0%;  Pred. No. 2.6e-25;
  Matches   31;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         11 RRAPQTGIVDECCFRSCDLRRLEMYCAPLKP 41
              |||||||||||||||||||||||||||||||
Db         58 RRAPQTGIVDECCFRSCDLRRLEMYCAPLKP 88


RESULT 13
IGFB_MOUSE
ID   IGFB_MOUSE     STANDARD;      PRT;   133 AA.
AC   P05018;
DT   13-AUG-1987 (Rel. 05, Created)
DT   13-AUG-1987 (Rel. 05, Last sequence update)
DT   15-MAR-2004 (Rel. 43, Last annotation update)
DE   Insulin-like growth factor IB precursor (IGF-IB) (Somatomedin).
GN   IGF1 OR IGF-1.
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Liver;
RX   MEDLINE=87040760; PubMed=3774549;
RA   Bell G.I., Stempien M.M., Fong N.M., Rall L.B.;
RT   "Sequences of liver cDNAs encoding two different mouse insulin-like
RT   growth factor I precursors.";
RL   Nucleic Acids Res. 14:7873-7882(1986).
RN   [2]
RP   SEQUENCE FROM N.A.
RC   STRAIN=FVB/N; TISSUE=Liver;
RX   MEDLINE=22388257; PubMed=12477932;
RA   Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA   Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA   Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA   Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA   Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA   Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA   Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA   Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA   Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA   Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA   Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA   Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA   Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA   Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA   Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA   Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
RA   Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
RT   "Generation and initial analysis of more than 15,000 full-length
RT   human and mouse cDNA sequences.";
RL   Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
CC   -!- FUNCTION: The insulin-like growth factors, isolated from plasma,
CC       are structurally and functionally related to insulin but have a
CC       much higher growth-promoting activity.
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- ALTERNATIVE PRODUCTS:
CC       Event=Alternative splicing; Named isoforms=2;
CC       Name=IGF-IB;
CC         IsoId=P05018-1; Sequence=Displayed;
CC       Name=IGF-IA;
CC         IsoId=P05017-1; Sequence=External;
CC   -!- SIMILARITY: Belongs to the insulin family.
CC   ---------------------------------------------------------------------
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CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; X04482; CAA28170.1; -.
DR   EMBL; BC012409; AAH12409.1; -.
DR   HSSP; P01343; 1GF1.
DR   MGD; MGI:96432; Igf1.
DR   GO; GO:0010001; P:glial cell differentiation; IMP.
DR   GO; GO:0007399; P:neurogenesis; IMP.
DR   InterPro; IPR004825; Ins/IGF/relax.
DR   Pfam; PF00049; Insulin; 1.
DR   PRINTS; PR00277; INSULINB.
DR   SMART; SM00078; IlGF; 1.
DR   PROSITE; PS00262; INSULIN; 1.
KW   Insulin family; Growth factor; Plasma; Alternative splicing; Signal.
FT   SIGNAL        1     22
FT   CHAIN        23     92       INSULIN-LIKE GROWTH FACTOR IB.
FT   DOMAIN       23     51       B.
FT   DOMAIN       52     63       C.
FT   DOMAIN       64     84       A.
FT   DOMAIN       85     92       D.
FT   PROPEP       93    133       E PEPTIDE.
FT   DISULFID     28     70       BY SIMILARITY.
FT   DISULFID     40     83       BY SIMILARITY.
FT   DISULFID     69     74       BY SIMILARITY.
SQ   SEQUENCE   133 AA;  14915 MW;  B8E5C05B88D62502 CRC64;

  Query Match             36.0%;  Score 31;  DB 1;  Length 133;
  Best Local Similarity   100.0%;  Pred. No. 2.7e-25;
  Matches   31;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         11 RRAPQTGIVDECCFRSCDLRRLEMYCAPLKP 41
              |||||||||||||||||||||||||||||||
Db         58 RRAPQTGIVDECCFRSCDLRRLEMYCAPLKP 88


RESULT 14
IGFA_RAT
ID   IGFA_RAT       STANDARD;      PRT;   153 AA.
AC   P08025;
DT   01-AUG-1988 (Rel. 08, Created)
DT   01-FEB-1991 (Rel. 17, Last sequence update)
DT   10-OCT-2003 (Rel. 42, Last annotation update)
DE   Insulin-like growth factor IA precursor (IGF-IA) (Somatomedin).
GN   IGF1 OR IGF-1.
OS   Rattus norvegicus (Rat).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
OX   NCBI_TaxID=10116;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=87222423; PubMed=3034909;
RA   Shimatsu A., Rotwein P.;
RT   "Mosaic evolution of the insulin-like growth factors. Organization,
RT   sequence, and expression of the rat insulin-like growth factor I
RT   gene.";
RL   J. Biol. Chem. 262:7894-7900(1987).
RN   [2]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Testis;
RX   MEDLINE=88003970; PubMed=3652906;
RA   Casella S.J., Smith E.P., van Wyk J.J., Joseph D.R., Hynes M.A.,
RA   Hoyt E.C., Lund P.K.;
RT   "Isolation of rat testis cDNAs encoding an insulin-like growth factor
RT   I precursor.";
RL   DNA 6:325-330(1987).
RN   [3]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=91103966; PubMed=1368571;
```

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RA   Kato H., Okoshi A., Miura Y., Noguchi T.;
RT   "A new cDNA clone relating to larger molecular species of rat
RT   insulin-like growth factor-I mRNA.";
RL   Agric. Biol. Chem. 54:1599-1601(1990).
RN   [4]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=89127259; PubMed=3221878;
RA   Roberts C.T., Lasky S.R., Lowe W.L., Seaman W.T., Leroith D.;
RT   "Structure of the rat insulin-like growth factor II transcriptional
RT   unit: heterogeneous transcripts are generated from two promoters by
RT   use of multiple polyadenylation sites and differential ribonucleic
RT   acid splicing.";
RL   Mol. Endocrinol. 2:1115-1126(1988).
RN   [5]
RP   SEQUENCE OF 46-153 FROM N.A.
RX   MEDLINE=87246437; PubMed=3595538;
RA   Murphy L.J., Bell G.I., Duckworth M.L., Friesen H.G.;
RT   "Identification, characterization, and regulation of a rat
RT   complementary deoxyribonucleic acid which encodes insulin-like growth
RT   factor-I.";
RL   Endocrinology 121:684-691(1987).
RN   [6]
RP   SEQUENCE OF 49-118.
RX   MEDLINE=89174609; PubMed=2538424;
RA   Tamura K., Kobayashi M., Ishii Y., Tamura T., Hashimoto K.,
RA   Nakamura S., Niwa M., Zapf J.;
RT   "Primary structure of rat insulin-like growth factor-I and its
RT   biological activities.";
RL   J. Biol. Chem. 264:5616-5621(1989).
CC   -!- FUNCTION: The insulin-like growth factors, isolated from plasma,
CC       are structurally and functionally related to insulin but have a
CC       much higher growth-promoting activity.
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- ALTERNATIVE PRODUCTS:
CC       Event=Alternative splicing; Named isoforms=2;
CC       Name=IGF-IA;
CC         IsoId=P08025-1; Sequence=Displayed;
CC       Name=IGF-IB;
CC         IsoId=P08024-1; Sequence=External;
CC   -!- SIMILARITY: Belongs to the insulin family.
CC   ---------------------------------------------------------------------
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CC   entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; X06043; CAA29436.1; -.
DR   EMBL; M15651; AAA41215.1; -.
DR   EMBL; M15647; AAA41215.1; JOINED.
DR   EMBL; M15648; AAA41215.1; JOINED.
DR   EMBL; M15649; AAA41215.1; JOINED.
DR   EMBL; M17714; AAA41227.1; -.
DR   EMBL; M17335; AAA41386.1; ALT_INIT.
DR   EMBL; M15481; AAA41387.1; ALT_INIT.
DR   PIR; B27804; B27804.
DR   HSSP; P01343; 1GF1.
DR   InterPro; IPR004825; Ins/IGF/relax.
DR   Pfam; PF00049; Insulin; 1.
DR   PRINTS; PR00277; INSULINB.
DR   SMART; SM00078; IlGF; 1.
DR   PROSITE; PS00262; INSULIN; 1.
KW   Insulin family; Growth factor; Plasma; Alternative splicing; Signal.
FT   SIGNAL       1     ?
FT   PROPEP       ?     48
FT   CHAIN       49    118       INSULIN-LIKE GROWTH FACTOR IA.
FT   DOMAIN      49     77        B.
FT   DOMAIN      78     89        C.
FT   DOMAIN      90    110        A.
FT   DOMAIN     111    118        D.
FT   PROPEP     119    153        E PEPTIDE.
FT   DISULFID    54     96        BY SIMILARITY.
FT   DISULFID    66    109        BY SIMILARITY.
FT   DISULFID    95    100        BY SIMILARITY.
FT   CONFLICT   110    112        APL -> VRC (IN REF. 4).
SQ   SEQUENCE   153 AA;  17079 MW;  966F3C0FA4EB3DE7 CRC64;

  Query Match             36.0%;  Score 31;  DB 1;  Length 153;
  Best Local Similarity   100.0%;  Pred. No. 3.1e-25;
  Matches   31;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         11 RRAPQTGIVDECCFRSCDLRRLEMYCAPLKP 41
              |||||||||||||||||||||||||||||||
Db         84 RRAPQTGIVDECCFRSCDLRRLEMYCAPLKP 114


RESULT 15
IGFB_RAT
ID   IGFB_RAT       STANDARD;      PRT;   181 AA.
AC   P08024;
DT   01-AUG-1988 (Rel. 08, Created)
DT   01-FEB-1991 (Rel. 17, Last sequence update)
DT   10-OCT-2003 (Rel. 42, Last annotation update)
DE   Insulin-like growth factor IB precursor (IGF-IB) (Somatomedin).
GN   IGF1 OR IGF-1.
OS   Rattus norvegicus (Rat).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
OX   NCBI_TaxID=10116;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=87222423; PubMed=3034909;
RA   Shimatsu A., Rotwein P.;
RT   "Mosaic evolution of the insulin-like growth factors. Organization,
RT   sequence, and expression of the rat insulin-like growth factor I
RT   gene.";
RL   J. Biol. Chem. 262:7894-7900(1987).
RN   [2]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=88015572; PubMed=3658684;
RA   Shimatsu A., Rotwein P.;
RT   "Sequence of two rat insulin-like growth factor I mRNAs differing
RT   within the 5' untranslated region.";
RL   Nucleic Acids Res. 15:7196-7196(1987).
RN   [3]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=89127259; PubMed=3221878;
RA   Roberts C.T., Lasky S.R., Lowe W.L., Seaman W.T., Leroith D.;
RT   "Structure of the rat insulin-like growth factor II transcriptional
RT   unit: heterogeneous transcripts are generated from two promoters by
RT   use of multiple polyadenylation sites and differential ribonucleic
RT   acid splicing.";
RL   Mol. Endocrinol. 2:1115-1126(1988).
RN   [4]
RP   SEQUENCE OF 49-118.
RX   MEDLINE=89174609; PubMed=2538424;
RA   Tamura K., Kobayashi M., Ishii Y., Tamura T., Hashimoto K.,
RA   Nakamura S., Niwa M., Zapf J.;
RT   "Primary structure of rat insulin-like growth factor-I and its
RT   biological activities.";
RL   J. Biol. Chem. 264:5616-5621(1989).
CC   -!- FUNCTION: The insulin-like growth factors, isolated from plasma,
CC       are structurally and functionally related to insulin but have a
CC       much higher growth-promoting activity.
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- ALTERNATIVE PRODUCTS:
CC       Event=Alternative splicing; Named isoforms=2;
CC       Name=IGF-IB;
CC         IsoId=P08024-1; Sequence=Displayed;
CC       Name=IGF-IA;
CC         IsoId=P08025-1; Sequence=External;
CC   -!- SIMILARITY: Belongs to the insulin family.
CC   ---------------------------------------------------------------------
CC   This SWISS-PROT entry is copyright. It is produced through a collaboration
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CC   entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; M15650; AAA41214.1; -.
DR   EMBL; M15647; AAA41214.1; JOINED.
DR   EMBL; M15648; AAA41214.1; JOINED.
DR   EMBL; M15649; AAA41214.1; JOINED.
DR   EMBL; X06107; CAA29480.1; ALT_SEQ.
DR   EMBL; M15480; AAA41385.1; ALT_SEQ.
DR   PIR; A27804; A27804.
DR   HSSP; P01343; 1GF1.
DR   InterPro; IPR004825; Ins/IGF/relax.
DR   Pfam; PF00049; Insulin; 1.
DR   PRINTS; PR00277; INSULINB.
DR   SMART; SM00078; IlGF; 1.
DR   PROSITE; PS00262; INSULIN; 1.
KW   Insulin family; Growth factor; Plasma; Alternative splicing; Signal.
FT   SIGNAL       1      ?
FT   PROPEP       ?     48
FT   CHAIN       49    118       INSULIN-LIKE GROWTH FACTOR IB.
FT   DOMAIN      49     77       B.
FT   DOMAIN      78     89       C.
FT   DOMAIN      90    110       A.
FT   DOMAIN     111    118       D.
FT   PROPEP     119    181       E PEPTIDE.
FT   DISULFID    54     96       BY SIMILARITY.
FT   DISULFID    66    109       BY SIMILARITY.
FT   DISULFID    95    100       BY SIMILARITY.
FT   CONFLICT   110    112       APL -> VRC (IN REF. 2).
SQ   SEQUENCE   181 AA;  20322 MW;  52BAB431875A1A06 CRC64;

  Query Match             36.0%;  Score 31;  DB 1;  Length 181;
  Best Local Similarity   100.0%;  Pred. No. 3.6e-25;
  Matches   31;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         11 RRAPQTGIVDECCFRSCDLRRLEMYCAPLKP 41
              |||||||||||||||||||||||||||||||
Db         84 RRAPQTGIVDECCFRSCDLRRLEMYCAPLKP 114


RESULT 16
IGF1_ONCKI
ID   IGF1_ONCKI     STANDARD;      PRT;   176 AA.
AC   P17085;
DT   01-AUG-1990 (Rel. 15, Created)
DT   01-AUG-1990 (Rel. 15, Last sequence update)
DT   10-OCT-2003 (Rel. 42, Last annotation update)
DE   Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
OS   Oncorhynchus kisutch (Coho salmon).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Actinopterygii; Neopterygii; Teleostei; Euteleostei;
OC   Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
OX   NCBI_TaxID=8019;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=90190659; PubMed=2628735;
RA   Cao Q.-P., Duguay S.J., Plisetskaya E.M., Steiner D.F., Chan S.J.;
RT   "Nucleotide sequence and growth hormone-regulated expression of
RT   salmon insulin-like growth factor I mRNA.";
RL   Mol. Endocrinol. 3:2005-2010(1989).
RN   [2]
RP   SEQUENCE OF 45-114.
RX   MEDLINE=94062830; PubMed=8243465;
RA   Moriyama S., Duguay S.J., Conlon J.M., Duan C., Dickhoff W.W.,
RA   Plisetskaya E.M.;
RT   "Recombinant coho salmon insulin-like growth factor I. Expression in
RT   Escherichia coli, purification and characterization.";
RL   Eur. J. Biochem. 218:205-211(1993).
CC   -!- FUNCTION: The insulin-like growth factors, isolated from plasma,
CC       are structurally and functionally related to insulin but have a
CC       much higher growth-promoting activity.
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- SIMILARITY: Belongs to the insulin family.
CC   ---------------------------------------------------------------------
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CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; M32792; AAA49410.1; -.
DR   PIR; A41396; A41396.
DR   HSSP; P01343; 1GF1.
DR   InterPro; IPR004825; Ins/IGF/relax.
DR   Pfam; PF00049; Insulin; 1.
DR   PRINTS; PR00277; INSULINB.
DR   SMART; SM00078; IlGF; 1.
DR   PROSITE; PS00262; INSULIN; 1.
KW   Insulin family; Growth factor; Plasma; Signal.
FT   SIGNAL       1      ?
FT   PROPEP       ?     44
FT   CHAIN       45    114       INSULIN-LIKE GROWTH FACTOR I.
FT   DOMAIN      45     73       B.
FT   DOMAIN      74     85       C.
FT   DOMAIN      86    106       A.
FT   DOMAIN     107    114       D.
FT   PROPEP     115    176       E PEPTIDE.
FT   DISULFID    50     92       BY SIMILARITY.
FT   DISULFID    62    105       BY SIMILARITY.
FT   DISULFID    91     96       BY SIMILARITY.
SQ   SEQUENCE   176 AA;  19517 MW;  4AADCFCCEDAD8094 CRC64;

  Query Match             17.4%;  Score 15;  DB 1;  Length 176;
  Best Local Similarity   100.0%;  Pred. No. 2e-08;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         43 KAARSVRAQRHTDMP 57
              |||||||||||||||
Db        112 KAARSVRAQRHTDMP 126


RESULT 17
IGF1_ONCMY
ID   IGF1_ONCMY     STANDARD;      PRT;   176 AA.
AC   Q02815;
DT   01-FEB-1995 (Rel. 31, Created)
DT   01-FEB-1995 (Rel. 31, Last sequence update)
DT   10-OCT-2003 (Rel. 42, Last annotation update)
DE   Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
OS   Oncorhynchus mykiss (Rainbow trout) (Salmo gairdneri).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Actinopterygii; Neopterygii; Teleostei; Euteleostei;
OC   Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
OX   NCBI_TaxID=8022;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Liver;
RX   MEDLINE=93028377; PubMed=1409585;
RA   Shamblott M.J., Chen T.T.;
RT   "Identification of a second insulin-like growth factor in a fish
RT   species.";
RL   Proc. Natl. Acad. Sci. U.S.A. 89:8913-8917(1992).
CC   -!- FUNCTION: The insulin-like growth factors, isolated from plasma,
CC       are structurally and functionally related to insulin but have a
CC       much higher growth-promoting activity.
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- SIMILARITY: Belongs to the insulin family.
CC   ---------------------------------------------------------------------
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CC   use  by  non-profit  institutions as long  as its content  is  in  no  way
CC   modified and this statement is not removed.  Usage  by  and for commercial
CC   entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------------
DR   EMBL; M95183; AAA49412.1; -.
DR   PIR; A46244; A46244.
DR   HSSP; P01343; 1GF1.
DR   InterPro; IPR004825; Ins/IGF/relax.
DR   Pfam; PF00049; Insulin; 1.
DR   PRINTS; PR00277; INSULINB.
DR   SMART; SM00078; IlGF; 1.
DR   PROSITE; PS00262; INSULIN; 1.
KW   Insulin family; Growth factor; Plasma; Signal.
FT   SIGNAL        1      ?
FT   PROPEP        ?     44       BY SIMILARITY.
FT   CHAIN        45    114       INSULIN-LIKE GROWTH FACTOR I.
FT   DOMAIN       45     73       B.
FT   DOMAIN       74     85       C.
FT   DOMAIN       86    106       A.
FT   DOMAIN      107    114       D.
FT   PROPEP      115    176       E PEPTIDE.
FT   DISULFID     50     92       BY SIMILARITY.
FT   DISULFID     62    105       BY SIMILARITY.
FT   DISULFID     91     96       BY SIMILARITY.
SQ   SEQUENCE   176 AA;  19510 MW;  DE86283D80DDAD06 CRC64;

  Query Match             17.4%;  Score 15;  DB 1;  Length 176;
  Best Local Similarity   100.0%;  Pred. No. 2e-08;
  Matches   15;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         43 KAARSVRAQRHTDMP 57
              |||||||||||||||
Db        112 KAARSVRAQRHTDMP 126


RESULT 18
IGF1_COTJA
ID   IGF1_COTJA     STANDARD;      PRT;   124 AA.
AC   P51462;
DT   01-OCT-1996 (Rel. 34, Created)
DT   01-OCT-1996 (Rel. 34, Last sequence update)
DT   10-OCT-2003 (Rel. 42, Last annotation update)
DE   Insulin-like growth factor I precursor (IGF-I) (Somatomedin)
DE   (Fragment).
GN   IGF1.
OS   Coturnix coturnix japonica (Japanese quail).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
OC   Coturnix.
OX   NCBI_TaxID=93934;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=95187621; PubMed=7881819;
RA   Kida S., Iwaki M., Nakamura A., Miura Y., Takenaka A., Takahashi S.,
RA   Noguchi T.;
RT   "Insulin-like growth factor-I messenger RNA content in the oviduct of
RT   Japanese quail (Coturnix coturnix japonica): changes during growth
RT   and development or after estrogen administration.";
RL   Comp. Biochem. Physiol. 109C:191-204(1994).
CC   -!- FUNCTION: The insulin-like growth factors, isolated from plasma,
CC       are structurally and functionally related to insulin but have a
CC       much higher growth-promoting activity.
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- SIMILARITY: Belongs to the insulin family.
CC   ---------------------------------------------------------------------------
CC   This SWISS-PROT entry is copyright. It is produced through a collaboration
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CC   use  by  non-profit  institutions as long  as its content  is  in  no  way
CC   modified and this statement is not removed.  Usage  by  and for commercial
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CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------------
DR   EMBL; S75247; -; NOT_ANNOTATED_CDS.
DR   HSSP; P01343; 1GF1.
DR   InterPro; IPR004825; Ins/IGF/relax.
DR   Pfam; PF00049; Insulin; 1.
DR   PRINTS; PR00277; INSULINB.
DR   SMART; SM00078; IlGF; 1.
DR   PROSITE; PS00262; INSULIN; 1.
KW   Insulin family; Growth factor; Plasma.
FT   NON_TER       1      1
FT   PROPEP       <1     19       POTENTIAL.
FT   CHAIN        20     89       INSULIN-LIKE GROWTH FACTOR I.
FT   DOMAIN       20     48       B.
FT   DOMAIN       49     60       C.
FT   DOMAIN       61     81       A.
FT   DOMAIN       82     89       D.
FT   PROPEP       90    124       E PEPTIDE.
FT   DISULFID     25     67       BY SIMILARITY.
FT   DISULFID     37     80       BY SIMILARITY.
FT   DISULFID     66     71       BY SIMILARITY.
SQ   SEQUENCE   124 AA;  13888 MW;  52254EB1BA52C3B6 CRC64;

  Query Match             16.3%;  Score 14;  DB 1;  Length 124;
  Best Local Similarity   100.0%;  Pred. No. 1.6e-07;
  Matches   14;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         45 ARSVRAQRHTDMPK 58
              ||||||||||||||
Db         89 ARSVRAQRHTDMPK 102


RESULT 19
IGF1_CHICK
ID   IGF1_CHICK     STANDARD;      PRT;   153 AA.
AC   P18254;
DT   01-NOV-1990 (Rel. 16, Created)
DT   01-NOV-1990 (Rel. 16, Last sequence update)
DT   10-OCT-2003 (Rel. 42, Last annotation update)
DE   Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
GN   IGF1.
OS   Gallus gallus (Chicken).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
OC   Gallus.
OX   NCBI_TaxID=9031;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=90190648; PubMed=2628728;
RA   Kajimoto Y., Rotwein P.;
RT   "Structure and expression of a chicken insulin-like growth factor I
RT   precursor.";
RL   Mol. Endocrinol. 3:1907-1913(1989).
RN   [2]
RP   SEQUENCE OF 1-21 FROM N.A.
RX   MEDLINE=91236750; PubMed=2033062;
RA   Rotwein P., Kajimoto Y.;
RT   "Structure of the chicken insulin-like growth factor I gene reveals
RT   conserved promoter elements.";
RL   J. Biol. Chem. 266:9724-9731(1991).
RN   [3]
RP   SEQUENCE OF 49-118.
RX   MEDLINE=91106695; PubMed=2272467;
RA   Ballard F.J., Johnson R.J., Owens P.C., Francis G.L., Upton F.M.,
RA   McMurtry J.P., Wallace J.C.;
RT   "Chicken insulin-like growth factor-I: amino acid sequence,
RT   radioimmunoassay, and plasma levels between strains and during
RT   growth.";
RL   Gen. Comp. Endocrinol. 79:459-468(1990).
CC   -!- FUNCTION: The insulin-like growth factors, isolated from plasma,
CC       are structurally and functionally related to insulin but have a
CC       much higher growth-promoting activity.
CC   -!- SUBCELLULAR LOCATION: Secreted.
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CC   -!- SIMILARITY: Belongs to the insulin family.
CC   ---------------------------------------------------------------------
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CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; M32791; AAA48828.1; -.
DR   EMBL; M74176; AAA48829.1; -.
DR   PIR; A41399; A41399.
DR   HSSP; P01343; 1GF1.
DR   InterPro; IPR004825; Ins/IGF/relax.
DR   Pfam; PF00049; Insulin; 1.
DR   PRINTS; PR00277; INSULINB.
DR   SMART; SM00078; IlGF; 1.
DR   PROSITE; PS00262; INSULIN; 1.
KW   Insulin family; Growth factor; Plasma; Signal.
FT   SIGNAL       1      ?
FT   PROPEP       ?     48
FT   CHAIN       49    118       INSULIN-LIKE GROWTH FACTOR I.
FT   DOMAIN      49     77       B.
FT   DOMAIN      78     89       C.
FT   DOMAIN      90    110       A.
FT   DOMAIN     111    118       D.
FT   PROPEP     119    153       E PEPTIDE.
FT   DISULFID    54     96       BY SIMILARITY.
FT   DISULFID    66    109       BY SIMILARITY.
FT   DISULFID    95    100       BY SIMILARITY.
SQ   SEQUENCE   153 AA;  17267 MW;  AAE13FDED13EE2F8 CRC64;

  Query Match             16.3%;  Score 14;  DB 1;  Length 153;
  Best Local Similarity   100.0%;  Pred. No. 1.9e-07;
  Matches   14;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         45 ARSVRAQRHTDMPK 58
              ||||||||||||||
Db        118 ARSVRAQRHTDMPK 131


RESULT 20
IGF1_XENLA
ID   IGF1_XENLA     STANDARD;      PRT;   153 AA.
AC   P16501;
DT   01-AUG-1990 (Rel. 15, Created)
DT   01-AUG-1990 (Rel. 15, Last sequence update)
DT   10-OCT-2003 (Rel. 42, Last annotation update)
DE   Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
OS   Xenopus laevis (African clawed frog).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
OC   Xenopodinae; Xenopus.
OX   NCBI_TaxID=8355;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=90231335; PubMed=2330002;
RA   Kajimoto Y., Rotwein P.;
RT   "Evolution of insulin-like growth factor I (IGF-I): structure and
RT   expression of an IGF-I precursor from Xenopus laevis.";
RL   Mol. Endocrinol. 4:217-226(1990).
CC   -!- FUNCTION: The insulin-like growth factors, isolated from plasma,
CC       are structurally and functionally related to insulin but have a
CC       much higher growth-promoting activity.
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- SIMILARITY: Belongs to the insulin family.
CC   ---------------------------------------------------------------------
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CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; M29857; AAA70330.1; -.
DR   PIR; A36079; A36079.
DR   HSSP; P01343; 1GF1.
DR   InterPro; IPR004825; Ins/IGF/relax.
DR   Pfam; PF00049; Insulin; 1.
DR   PRINTS; PR00277; INSULINB.
DR   SMART; SM00078; IlGF; 1.
DR   PROSITE; PS00262; INSULIN; 1.
KW   Insulin family; Growth factor; Plasma; Signal.
FT   SIGNAL       1      ?
FT   PROPEP       ?     48
FT   CHAIN       49    118       INSULIN-LIKE GROWTH FACTOR I.
FT   DOMAIN      49     77       B.
FT   DOMAIN      78     89       C.
FT   DOMAIN      90    110       A.
FT   DOMAIN     111    118       D.
FT   PROPEP     119    153       E PEPTIDE.
FT   DISULFID    54     96       BY SIMILARITY.
FT   DISULFID    66    109       BY SIMILARITY.
FT   DISULFID    95    100       BY SIMILARITY.
SQ   SEQUENCE   153 AA;  17349 MW;  720EDDAA17AFCFBE CRC64;

  Query Match             16.3%;  Score 14;  DB 1;  Length 153;
  Best Local Similarity   100.0%;  Pred. No. 1.9e-07;
  Matches   14;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         45 ARSVRAQRHTDMPK 58
              ||||||||||||||
Db        118 ARSVRAQRHTDMPK 131


RESULT 21
IGFA_CYPCA
ID   IGFA_CYPCA     STANDARD;      PRT;   161 AA.
AC   Q90325;
DT   01-NOV-1997 (Rel. 35, Created)
DT   01-NOV-1997 (Rel. 35, Last sequence update)
DT   10-OCT-2003 (Rel. 42, Last annotation update)
DE   Insulin-like growth factor I, adult form precursor.
OS   Cyprinus carpio (Common carp).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Actinopterygii; Neopterygii; Teleostei; Ostariophysi; Cypriniformes;
OC   Cyprinidae; Cyprinus.
OX   NCBI_TaxID=7962;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Liver;
RX   MEDLINE=97283739; PubMed=9137817;
RA   Hashimoto H., Mikawa S., Takayama E., Yokoyama Y., Toyohara H.,
RA   Sakaguchi M.;
RT   "Molecular cloning and growth hormone-regulated gene expression of
RT   carp insulin-like growth factor-I.";
RL   Biochem. Mol. Biol. Int. 41:877-886(1997).
CC   -!- FUNCTION: The insulin-like growth factors, isolated from plasma,
CC       are structurally and functionally related to insulin but have a
CC       much higher growth-promoting activity.
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- SIMILARITY: Belongs to the insulin family.
CC   ---------------------------------------------------------------------
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CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; D83271; BAA11878.1; -.
DR   HSSP; P01343; 1GF1.
DR   InterPro; IPR004825; Ins/IGF/relax.
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